REPORT OF RCRA COMPLIANCE EVALUATION INSPECTION

At

GBW RAILCAR SERVICES, LLC
15624 258th Road
Cummings, Kansas 66016
(866) 785-4082

EPA ID Number: KSD043936277

On

August 9-11, 2016

By

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region VII
Environmental Sciences and Technology Division

1.0 INTRODUCTION

At the request of the Air and Waste Management Division, I conducted a Resource Conservation and Recovery Act (RCRA) compliance evaluation inspection (CEI) at GBW Railcar Services, LLC (GBW), located in Cummings, Kansas, on August 9-11, 2016. The CEI was conducted under the authority of Section 3007(a) of RCRA, as amended. During the CEI, I collected the information and data necessary to determine compliance with the applicable regulatory and statutory requirements. The inspection report and attachments present the results of the CEI. The CEI was conducted as a Level B Multi-Media Inspection and the *Region 7 Multimedia Screening Checklist* is included as Attachment 1.

2.0 PARTICIPANTS

GBW:
Andrea R. Jones, Environmental, Health, and Safety Manager
Ryan Schaffer, Plant Manager
Frank Pfeifer, Corporate Environmental, Health, and Safety Manager
Mitch Weinmann, Paint Supervisor/Railcar Cleaning Lead
Dan Weaver, Mechanic
Travis Seetin, Quality Assurance Manager
Josh Sanders, Valve Technician
Bill Kane, Fabrication
Gene Simpson, Maintenance
Jerome Maendele, Lead Man Building 1

U.S. Environmental Protection Agency (EPA):
Michael J. Martin, Physical Scientist

3.0 INSPECTION PROCEDURES

Upon arriving unannounced at GBW at 9:36 a.m. on August 9, 2016, I met with Ms. Jones. I presented her with my EPA credentials and explained the purpose and procedures of the inspection. I next presented her with a copy of RCRA Section 3007(a), which provides inspection authority. I explained my need to collect accurate information and presented her with a copy of Title 18 U.S. Code, Sections 1001 and 1002. She was made aware of her confidentiality rights and was informed that a *Confidentiality Notice* would be provided at the end of the inspection to make or not to make any confidentiality claims. Ms. Jones, Mr. Shaffer, and Mr. Pfeifer acted as the official facility representatives during the course of the inspection.

The inspection consisted of a discussion of facility operations, waste generation and waste management; a review of waste management records; and a visual inspection of waste generation and management areas. See attachment 2 for the Facility Layout.

I conducted a visual inspection of the following areas at GBW:

Tank Car Cleaning Area (Equipment Boxcar, Wash Track, Wastewater Storage Area, and Hazardous Waste Storage Area 1)
Breakdown Pad (Flare Unit and Steam Area)
Paint Storage Boxcar
Building 1 (Tank Car Maintenance and Used Oil Storage Area)
Building 2 (Paint Shop, Blast Shop, and Hazardous Waste Storage Area 2)
Building 3 (Fabrication Shop and Valve Shop)
Equipment Storage Building
Scrap Metal Storage Area
Spent Blasting Media Storage Area

Document photocopies and photographs were collected as inspection documentation (attachments 1-35 and photos 1-59 with attached photolog). Information collected during the inspection is documented on the *Kansas Department of Health and Environment* (KDHE) *Hazardous Waste Generator Compliance Inspection Checklist* (attachment 3). I followed the inspection procedures discussed in the RCRA CEI Standard Operating Procedure (No. 2321.1D), unless noted differently. Any authorized Federal regulatory citations noted in this report are as adopted by reference in the authorized Kansas regulations.

At the conclusion of the inspection, I summarized my findings and recommendations with Ms. Jones, Mr. Schaffer, Mr. Wienmann, and Mr. Pfeifer. I provided Ms. Jones with a *Confidentiality Notice* (attachment 4), a *Receipt for Documents and Samples* (attachment 5), and a *Notice of Violation* (NOV) (attachment 6), which she signed as acknowledgement of receipt. No confidentiality claims were made by GBW.

The following inspection documents and compliance assistance handouts were left with GBW:

RCRA Section 3007(a)
Title 18 U.S. Code, Sections 1001 and 1002
Confidentiality Notice (Top page of the completed carbonless transfer set)
Receipt for Documents and Samples (Top page of the completed carbonless transfer set)
Notice of Violation (Top page of the completed carbonless transfer set)
Instructions for Responding to a Notice of Violation (EPA Handout)
Security Awareness (EPA Handout)
Commercial Motor Vehicle Transportation Security Planning (EPA Handout)
U.S. EPA Small Business Resources (EPA Handout)
Hazardous Waste Determinations and Documentation (KDHE Technical Guidance Document)
Characteristic and Listed Hazardous Wastes (KDHE Technical Guidance Document)
Container Management for Hazardous Waste Generators (KDHE Technical Guidance Document)
Solvent-Contaminated Wipes (KDHE Technical Guidance Document)
Spent Fluorescent Lamps Containing Mercury (KDHE Technical Guidance Document)

4.0 FINDINGS AND OBSERVATIONS

4.1 Facility Information and Operations

GBW operates a railcar maintenance facility. GBW services a total of 50 railcars (tank and hopper) per month. Maintenance activities include interior cleaning, welding, metal fabrication, interior/exterior blasting, interior/exterior painting, and non-destructive testing (NDT). Interior cleaning is conducted on tank cars that stored crude oil, asphalt, denatured ethanol, liquefied petroleum gas (LPG), soybean oil, or palm oil. GBW is located on 25 acres in a rural area and has a total of five buildings on-site. GBW is staffed by 30 employees and operates from 6:00 a.m. to 2:30 p.m., Monday through Friday.

4.2 RCRA Status

GBW was last inspected for RCRA compliance on January 15-16, 2013, by the KDHE. During the January 2013 KDHE inspection, GBW was cited for not conducting a hazardous waste determination, not maintaining written waste determinations, not conducting weekly hazardous waste inspections, not posting emergency information, not establishing a hazardous waste training program, not including the EPA identification number on a manifest, and not including the manifest tracking number on a manifest. According to the EPA RCRA Handler Information Report, GBW notified as a Large Quantity Generator (LQG) of D001, D006, D007, D008, D018, D035, F003, and F005 hazardous waste on February 17, 2016. See attachment 7 for the EPA RCRA Handler Information Report. I asked Ms. Jones to review the EPA RCRA Handler Information Report, which I provided to her during the inspection. She indicated that Don Lassen (listed site contact on the EPA RCRA Handler Information Report) was no longer employed by GBW. Ms. Jones stated that she became the new site contact during May 2015. I asked Ms. Jones if GBW had notified the KDHE of the change of site contact.

Ms. Jones stated "Yes" and she provided me with a copy of the 2015 Hazardous Waste Report (attachment 8) for review. From my review of the 2015 Hazardous Waste Report, it appears that Ms. Jones was listed as the site contact on February 24, 2016. In addition, it appears that GBW did not notify the KDHE within 60 days of the change of site contact. **Failure to provide updated notification to the KDHE within 60 days is in violation of KAR 28-31-4** ***(NOV 2)***. From my review of the 2016 uniform hazardous waste manifest, it appears that GBW generates 2,200 pounds or greater of known hazardous waste per month. See attachment 9 for the 2016 Hazardous Waste Manifests Tracking Summary. Based on my review of the monthly hazardous waste generation rate, I determined GBW to be an LQG of D001, D007, D008, D018, D035, F003, and F005 hazardous waste. In addition, I determined GBW to be a small quantity handler of universal waste-lamps and a used oil generator.

4.3 Facility Waste Streams and Management

A. Tank Car Cleaning Area/Wastewater Storage Area

GBW's tank car cleaning process:

1. Prior to a tank car arriving on-site, the customer provides GBW with the type of work needed, the name of the last contents stored in the tank car, and a material safety data sheet (MSDS) or safety data sheet (SDS) of the contents. GBW then develops a work order. Ms. Jones stated that GBW's personnel conduct the interior cleaning on the tank cars on-site. Ms. Jones stated that prior to September 2015, Specialty Rescue & Fire Service (Grandview, Texas) had conducted the interior cleaning on the tank cars on-site.

2. Once the tank car arrives on-site, the work order is reviewed and the tank car volume is determined.

    a. Waste crude oil remaining in tank cars is emptied into 55-gallon drums and stored at the Wash Track. See attachment 10 for the Wolverine Terminals Heavy Crude Oil MSDS and see attachment 11 for the Peace River Seal Heavy Crude Oil MSDS. After the initial draining, the crude oil tank cars are sprayed with three gallons of diesel fuel and rinsed with water. Based on the customer's preference, 10 gallons of NanoDissolve gel (attachment 12) is used to the clean the crude oil tank cars instead of diesel fuel. After cleaning with diesel fuel/water or NanoDissolve gel/water, the tank cars are cleaned with a water only rinse. Once the cleaning process is complete, interior blasting is conducted on crude oil tank cars that do not meet cleaning specifications. After interior blasting, these tank cars are cleaned with five gallons of a 95% water/5% caustic soda rinse. Ms. Jones stated that the waste crude oil, waste diesel/water rinse, and waste NanoDissolve gel/water rinse contain crude oil solids, are collected in 55-gallon drums, managed as D001 and D018 characteristic hazardous waste (based on process knowledge), and disposed by Petro-Chem (Detroit, Michigan).

Ms. Jones stated that the water only rinse and water/caustic soda rinse do not contain crude oil solids, are collected in 55-gallon drums, managed as non-hazardous (based on process knowledge), and disposed by Heritage-Crystal Clean (Kansas City, Kansas).

b. Waste denatured ethanol remaining in tank cars is not removed and remains in the tank cars during the cleaning process. See attachments 13 for the Green Plain Denatured Ethanol SDS and 14 for the Pacific Denatured Ethanol SDS. These tank cars are sent to the Breakdown Pad, connected to a flare unit, steamed for two to eight hours at 250°F, sent to the Waste Track, and cleaned with water. Based on the customer's preference, the tank cars are rinsed with three gallons of Hempel's Light Clean. See attachment 15 for the Hempel's Light Clean SDS. The wastewater is collected in 55-gallon drums and/or one 3,500-gallon aboveground storage tank (AST), managed as non-hazardous waste (based on GBW's process knowledge), and disposed by Heritage-Crystal Clean (Kansas City, Kansas).

c. Tank cars that stored LPG are sent to the Breakdown Pad, connected to a flare unit, steamed for two to eight hours at 250°F, sent to the Waste Track, and cleaned with water. Based on the customer's preference, the tank cars are rinsed with three gallons of Hempel's Light Clean (attachment 15). The wastewater is collected in one 3,500-gallon AST, managed as non-hazardous waste (based on GBW's process knowledge), and disposed by Heritage-Crystal Clean (Kansas City, Kansas).

d. Tank cars that stored asphalt are sent to the Breakdown Pad and bottom outlet valve (BOV) maintenance is conducted. Mr. Schaffer stated that BOV maintenance is only conducted on the asphalt tank cars and no waste asphalt is generated. Mr. Schaffer stated that no waste asphalt had been generated in two to three years.

e. Waste soybean oil and palm oil remaining in tank cars are emptied into 55-gallon drums, managed as non-hazardous waste (based on GBW's process knowledge), and stored at the Wash Track. Heritage-Crystal Clean (Kansas City, Kansas) disposes of the waste soybean oil and palm oil. The soybean oil and palm oil tank cars are cleaned with water. The wastewater is collected in one 3,500-gallon AST, managed as non-hazardous waste (based on GBW's process knowledge), and disposed by Heritage-Crystal Clean (Kansas City, Kansas).

3. After cleaning, the tank cars are air dried and repaired (metal fabrication, welding, general maintenance, valve maintenance, NDT, interior painting, and/or exterior painting).

Crude Oil Waste Containing Solids - GBW generates between ten to twenty 55-gallon drums (4,000 to 8,000 pounds) of crude oil waste containing solids (solid crude oil, diesel fuel/water rinse, and NanoDissolve gel/water rinse) per month from the cleaning of crude oil tank cars. See attachment 10 for the Wolverine Terminals Heavy Crude Oil MSDS and see attachment 11 for the Peace River Seal Heavy Crude Oil MSDS. The crude oil waste containing solids is collected in 55-gallon drums, managed as D001 and D018 characteristic hazardous waste (based on GBW's process knowledge), and disposed by Petro-Chem (Detroit, Michigan). GBW last disposed of fifteen 55-gallon drums (6,000 pounds) of crude oil waste containing solids on August 10, 2016. See attachment 16 for the August 10, 2016, Uniform Hazardous Waste Manifest.

On August 9, 2016, I observed fifteen 55-gallon less than 90 day hazardous waste accumulation drums (hazardous waste storage drums) of crude oil waste containing solids at the Tank Car Cleaning Area (Hazardous Waste Storage Area 1) (photos 3-10, 13, and 14). *The 15 drums (6,000 pounds) were the same drums shipped for off-site disposal on August 14, 2016.* All 15 drums were closed, 14 drums were full, and one drum was half-full (photo 4). All 15 drums were not labeled with the words "Hazardous Waste." **Failure to label hazardous waste storage drums with the words "Hazardous Waste" is in violation of 40 CFR 262.34(a)(3)** ***(NOV 6)***. Ten of the 15 drums were marked with the August 4, 2016, accumulation start date. Two of the 15 drums were marked with the August 8, 2016, accumulation start date. Three of the 15 drums were not marked with an accumulation start date (photos 5 and 7). **Failure to mark hazardous waste storage containers with the accumulation start date is in violation of 40 CFR 262.34(a)(2)** ***(NOV 5)***. One of the 15 drums had a severely dented lid (photo 6). **Failure to store hazardous waste in a drum that is in good condition is in violation of 40 CFR 265.171** ***(NOV 8A)***. The aisle space of 14 of the 15 drums appeared not to allow the unobstructed movement of personnel, fire equipment, or spill control equipment (photos 3, 5, 6, 7, 9, and 10). **Failure to provide adequate aisle space for the unobstructed movement of personnel, fire protection, and spill control equipment is in violation of 40 CFR 265.35** ***(NOV 10)***. I asked Ms. Jones if GBW conducts inspections on the hazardous waste storage drums of crude oil waste containing solids. Ms. Jones stated that she conducts weekly hazardous waste inspections and takes weekly photographs of the hazardous waste storage drums. I asked Ms. Jones if the weekly hazardous waste inspections were documented in a log that contains the inspector's name, date of inspection, time of inspection, and notation of observations. Ms. Jones stated "No." **Failure to document weekly hazardous waste inspections is in violation of 40 CFR 265.15(d)** ***(NOV 9)***. At the time of the inspection, Ms. Jones did not provide me with the weekly inspection photographs for review. On August 11, 2016, I observed four of the fifteen 55-gallon hazardous waste storage drums of crude oil containing solids labeled with the words "Hazardous Waste," labeled per the Department of Transportation (DOT), and marked per DOT (photos 51 and 52). I did not observe the management of the remaining eleven of fifteen 55-gallon hazardous waste storage drums of crude oil containing solids, due to the drums already loaded on Heritage-Crystal Clean's transport vehicle.

On the NOV form (NOVs 3 and 4A), I inadvertently cited 40 CFR 262.31 (not labeled per DOT) and 40 CFR 262.32(a) & (b) (not marked per DOT) for the fifteen 55-gallon hazardous waste storage drums of crude oil waste containing solids. On August 9, 2016, the fifteen 55-gallon hazardous waste storage drums of crude oil waste containing solids were not labeled (flammable liquid, poison, etc.) per the DOT and not marked (consignee's or cosigner's name and address, etc.) per the DOT. After further review, I determined that the fifteen drums were not being transported or offered for off-site transport on August 9, 2016. Therefore, NOVs 3 and 4A were rescinded.

Crude Oil Waste Not Containing Solids - GBW generates crude oil waste not containing solids (water only rinses and 95% water/5% caustic soda rinses) from the cleaning of crude oil tank cars. The crude oil waste not containing solids is collected in 55-gallon drums, managed as non-hazardous waste (based on GBW's process knowledge), and disposed by Heritage-Crystal Clean (Kansas City, Kansas). From my review of the 2016 Non-Hazardous Waste Manifests Tracking Summary (attachment 17) and Work Order 8MM5M (attachment 18), it appears that GBW disposed of four 55-gallon drums (1,600 pounds) of crude oil waste not containing solids on July 5, 2016. I asked Ms. Jones if the crude oil waste not containing solids would exhibit the characteristic of benzene (D018). Ms. Jones stated that she did not know. I asked Ms. Jones if GBW had conducted a hazardous waste determination on the crude oil waste not containing solids for D018 purposes. Ms. Jones stated "No." **Failure to conduct an adequate hazardous waste determination is in violation of 40 CFR 262.11 *(NOV 1D)*.** At the time of the inspection, I did not observe any crude oil waste not containing solids being generated or accumulated on-site.

Non-Crude Oil Wastewater - GBW generates 1,500 gallons of non-crude wastewater per month from the cleaning of denatured ethanol, LPG, soybean oil, and palm oil tank cars. From my review of the 2016 Non-Hazardous Waste Manifests Tracking Summary (attachment 17), it appears that GBW had disposed of a total of 48,358 pounds of non-crude oil wastewater in 2016. The non-crude oil wastewater is collected in 55-gallon drums and/or one 3,500-gallon AST, managed as non-hazardous waste (based on GBW's process knowledge), and disposed by Heritage-Crystal Clean (Kansas City, Kansas). See attachment 19 for Ethanol/LPG Wastewater Written Waste Determination Documentation. At Hazardous Waste Storage Area 1, I observed one 55-gallon drum of waste denatured ethanol/water mixture (photos 3, 7, 8, and 11). The drum was full, in good condition, closed, and unlabeled. At the Wastewater Storage Area, I observed one 3,500-gallon AST (bulk tank) of non-crude oil wastewater (photo 12). The bulk tank was 300 gallons full, in good condition, closed, and labeled with the words "Wastewater." From my review of the Green Plains denatured ethanol SDS (attachment 13), it appears that the waste denatured ethanol would contain benzene. The SDS did not provide sufficient information for me to determine if the waste denatured ethanol/water mixture would exhibit the characteristic of benzene (D018). I asked Ms. Jones if the non-crude oil wastewater would exhibit the characteristic of benzene (D018). Ms. Jones stated that she did not know. I asked Ms. Jones if GBW had conducted a hazardous waste determination on the non-crude oil wastewater for D018 purposes. Ms. Jones stated "No." **Failure to conduct an adequate hazardous waste determination is in violation of 40 CFR 262.11 *(NOV 1A)*.**

2014 Wash Pit Wastewater - From my review of the 2014-2016 non-hazardous waste shipment records, I observed one November 3, 2014, bill of lading for 3,000 gallons of wastewater to Reddi Services (Shawnee, Kansas). See attachment 20 for the November 13, 2014, Bill of Lading. Ms. Jones stated that the wastewater was generated from the cleaning of crude oil, corn meal, and ethanol tanks. Ms. Jones stated that the wastewater was collected in GBW's former wash pit on-site. Ms. Jones stated that the wash pit is no longer used and it was closed soon after the 2014 explosion on-site. *On December 11, 2014, a railcar was being prepared to be cleaned when an electronic heater ignited flammable gas vapors.* I asked Ms. Jones if the wastewater collected by Reddi Services on November 3, 2014, was hazardous waste. Ms. Jones stated that she did not know. Ms. Jones stated that she was not working at the GBW Cummings location in 2014 and Don Lassen (former RCRA site contact and employee) would be aware of the management (generation rate, generation process, and on-site management) of the wastewater previously stored in the old wash pit. At the time of the inspection, I did not observe any wash pits on-site. *Further EPA review will be needed to determine the 2014 management (generation rate, generation process, and hazardous waste determination) of the wash pit wastewater.*

Soybean Oil and Palm Oil - GBW generates waste soybean oil and palm oil from the cleaning of tank cars. Waste soybean oil and palm oil remaining in tank cars (prior to cleaning) are emptied into 55-gallon drums, managed as non-hazardous waste (based on GBW's process knowledge), stored at the Wash Track, and disposed by Heritage-Crystal Clean (Kansas City, Kansas). From my review of the 2016 Non-Hazardous Waste Manifests Tracking Summary (attachment 17), it appears that GBW disposed of 1,200 pounds of waste soybean oil and 3,400 pounds of waste palm oil in 2016. At the time of the inspection, I did not observe any waste soybean oil or palm oil being generated or accumulated on-site. I reviewed the management of the waste soybean oil and palm oil and no violations were noted.

Personal Protective Equipment (PPE) - GBW generates one 55-gallon drum of spent PPE (gloves and Tyvek suites) per month from the cleaning of tank cars. Mr. Weinmann stated that the spent PPE is disposed of in the general trash. Martin's Trash Service (Effingham, Kansas) disposes of the general trash. At the Equipment Boxcar, I observed one 55-gallon drum of spent PPE (photo 1). The drum was ¾ full, open, and unlabeled. I asked Ms. Jones if the spent PPE was hazardous waste. Ms. Jones stated that she did not know. I asked Ms. Jones if GBW had conducted a hazardous waste determination on the spent PPE. Ms. Jones stated "No." **Failure to conduct a hazardous waste determination is in violation of 40 CFR 262.11** ***(NOV 1B)***.

Unknown Drum - At the Equipment Boxcar, I observed one 10-gallon drum of an unknown liquid (photo 2). The drum was full, closed, and unlabeled. I asked Ms. Jones if she knew the contents inside the drum. Ms. Jones stated "No." I asked Ms. Jones if she knew the length of time of accumulation of the drum. Ms. Jones stated "No." I asked Ms. Jones if the drum stored waste. Ms. Jones stated that she did not know. I asked Ms. Jones if the drum stored hazardous waste. Ms. Jones stated that she did not know. I asked Ms. Jones if GBW had conducted a hazardous waste determination on the drum. Ms. Jones stated "No." **Failure to conduct a hazardous waste determination is in violation of 40 CFR 262.11** ***(NOV 1C)***.

Acetone/Toluene Waste Stream - From my review of the 2014-2016 non-hazardous waste shipment records, I observed one November 10, 2015, bill of lading for 4,675 pounds of acetone/toluene to Heritage-Crystal Clean (Kansas City, Kansas). The acetone/toluene waste stream was disposed as non-hazardous waste and shipped off-site with the DOT description "NA1993, Combustible Liquid, N.O.S., PG III (Acetone/Toluene), and ERG 128." See attachment 21 for the November 10, 2015, Bill of Lading. I asked Ms. Jones if she knew the generation process of the acetone/toluene waste stream. Ms. Jones stated that the acetone/toluene waste stream was generated from the cleaning of a toluene tank car. I asked Ms. Jones if the toluene tank car was cleaned with acetone, water, or any other cleaners. Ms. Jones stated that the toluene tank was cleaned with water. I asked Ms. Jones if the acetone/toluene waste stream exhibited the characteristics of D001-D040 and/or would be a U-listed hazardous waste. Ms. Jones stated that she did not know. I asked Ms. Jones if GBW had conducted a hazardous waste determination on the acetone/toluene waste stream. Ms. Jones stated "No." **Failure to conduct a hazardous waste determination is in violation of 40 CFR 262.11** ***(NOV 10)***. At the time of the inspection, I did not observe the acetone/toluene waste stream being generated or accumulated on-site.

Methyl Ethyl Ketone (MEK)/Diesel Waste Stream - From my review of the 2014-2016 uniform hazardous manifests, I observed eight 2015 off-site shipments (January 14, 2015, January 22, 2015, January 28, 2015, February 12, 2015, October 15, 2015, October 20, 2015, October 27, 2015, and November 12, 2015) of MEK/diesel waste to Petro-Chem (Detroit, Michigan). See attachment 8 for the 2015 Hazardous Waste Report. In addition, I observed five 2014 off-site shipments (September 25, 2014, October 13, 2014, October 28, 2014, November 11, 2014, and December 22, 2014) of MEK/diesel waste to Petro-Chem (Detroit, Michigan). See attachment 22 for the five 2014 MEK/Diesel Uniform Hazardous Waste Manifests. The MEK/diesel waste stream was shipped off-site with the DOT description "RQ, UN1993 Waste Flammable Liquids, N.O.S. 3, PG III, (Methyl Ethyl Ketone and Diesel), and ERG 128" and disposed as D001, D018, D035, and F005 hazardous waste. I asked Ms. Jones if she knew the generation process of the MEK/diesel waste stream. Ms. Jones stated that she did not know. Ms. Jones stated that Don Lassen (former RCRA site contact and employee) would be aware of the management (generation rate, generation process, and on-site management) of the MEK/diesel waste stream. Ms. Jones stated that GBW had not generated any MEK/diesel waste stream in 2016. At the time of the inspection, I did not observe the MEK/diesel waste stream being generated or accumulated on-site. *Further EPA review will be needed to determine the 2014 and 2015 management (generation rate, generation process, and on-site management) of the MEK/diesel waste stream.*

Benzene/Toluene Waste Streams - From my review of the 2014-2016 uniform hazardous manifests, I observed eight 2015 off-site shipments (March 26, 2015, April 10, 2015, April 29, 2015, May 6, 2015, May 26, 2015, June 11, 2015, June 19, 2015, and June 29, 2015) of benzene/toluene waste (liquid and solid waste stream) to EQ Oklahoma (Tulsa, Oklahoma). See attachment 8 for the March 26, 2015, April 10, 2015, April 29, 2015, May 6, 2015, May 26, 2015, June 11, 2015, and June 29, 2015, Uniform Hazardous Waste Manifests. See attachment 23 for the June 19, 2015, Uniform Hazardous Waste Manifest.

The benzene/toluene liquid waste stream was shipped off-site with the DOT description "RQ, UN1993 Waste Flammable Liquids, N.O.S (Toluene and Benzene), 3, PG II, Flammable, and ERG #128" and disposed as D001, D018, and F005 hazardous waste. The benzene/toluene solid waste stream was shipped off-site with the DOT description "RQ, UN1993 Waste Flammable Solids, Organic, N.O.S., (Benzene and Toluene), 4.1, PG II, Flammable, and ERG #133" and disposed as D001 and D018 characteristic hazardous waste. I asked Ms. Jones if she knew the generation process of the liquid and solid benzene/toluene waste streams. Ms. Jones stated that she did not know. At the time of the inspection, I did not observe the benzene/toluene waste streams being generated or accumulated on-site. *Further EPA review will be needed to determine the management (generation rate, generation process, and on-site management) of the benzene/toluene waste streams.*

B. Building 1

NDT Rags - Building 1 personnel generate 20 spent cloth rags (NDT rags) contaminated with SKC-S cleaner, SKL-WP2 penetrant, and SKD-S2 developer per month from non-destructive tests conducted on railcar parts. Ms. Jones stated that the spent cloth rags are disposed of in the general trash. Martin's Trash Service (Effingham, Kansas) disposes of the general trash. From my review of the SKC-S cleaner SDS (attachment 24) and SKD-S2 developer SDS (attachment 25), it appears that the spent cleaner and developer would exhibit the characteristic of ignitibility (D001). From my review of the SKL-SP2 penetrant SDS (attachment 26), it appears that the spent penetrant would be non-hazardous (if no other hazardous constituents are added to it). I asked Ms. Jones if the spent NDT rags would exhibit the characteristic of ignitibility (D001). Ms. Jones stated that she did not know. I asked Ms. Jones if GBW had conducted a hazardous waste determination on the spent NDT rags. Ms. Jones stated "No." **Failure to conduct a hazardous waste determination is in violation of 40 CFR 262.11** ***(NOV 1F)***. At the time of the inspection, I did not observe any spent NDT rags being generated or accumulated on-site.

Parts Washer Solvent - At Building 1, I observed one 20-gallon parts washer unit (photos 58 and 59). Ms. Jones stated that the parts washer unit had not been used for at least two years, she does not allow personnel to use the unit, and she does not know the type of solvent used in it. Ms. Jones stated that the parts washer unit stores waste solvent and she does not intend to operate the parts washer unit in the future. I asked Ms. Jones if GBW had conducted a hazardous waste determination on the waste parts washer solvent. Ms. Jones stated "No." **Failure to conduct a hazardous waste determination is in violation of 40 CFR 262.11** ***(NOV 1I)***.

Used Oil and Used Oil Filters - GBW generates used oil and used oil filters from the service of forklifts and facility vehicles. Wiese (St. Joseph, Missouri) services GBW's forklifts and recycles the generated used oil (generation rate not known by GBW) and used oil filters (generation rate not known by GBW). Per year, GBW generates between 10 to 15 gallons of used oil and between four to five used oil filters from the maintenance of facility vehicles. Heritage-Crystal Clean (Kansas City, Kansas) recycles the used oil and used oil filters. The used oil is collected in one 250-gallon AST. The used oil filters are hot-drained for 12 hours, the resulting used oil is transferred to the 250-gallon AST, and the empty filters are collected in one 55-gallon used oil storage drum. GBW manages the drain used oil filters as used oil.

Located directly outside Building 1, I observed one 250-gallon AST of used oil (photos 55-57). The AST was labeled with the words "Used Oil" and it appeared not to be in good condition (severely rusted tank body and deep crease in the tank body). **Failure to store used oil in an AST that is in good condition is in violation of 40 CFR 279.22(b)** ***(NOV 14A)***. Located directly outside Building 1, I also observed one 55-gallon used oil storage drum of drained oil filters (photos 53 and 54). The used oil storage drum was full, closed, and labeled with the words "Used Oil Filters Only." The used oil storage drum appeared not to be in good condition (severely rusted and dented drum lid). **Failure to store used oil in a drum that is in good condition is in violation of 40 CFR 279.22(b)** ***(NOV 14B)***.

Spent Lead-Acid Batteries - GBW generates five spent lead-acid batteries per year from the maintenance of facility vehicles. The spent lead-acid batteries are managed per 40 CFR 266 Subpart G and recycled by O'Reilly Auto Parts (Atchison, Kansas). At the time of the inspection, I did not observe any spent lead-acid batteries being generated or accumulated on-site. I reviewed the management of the spent lead-acid batteries and no violations were noted.

C. Building 2

Waste Paint/Solvent Mixture - The Paint Shop generates between one to four 55-gallon drums (500 to 2,000 pounds) of waste paint/solvent mixture per month from the cleaning of paint spray guns with virgin MEK solvent. See attachment 27 for the MEK MSDS. Virgin MEK solvent is flushed through the paint spray guns and the waste paint/solvent mixture is collected in 55-gallon drums. The waste paint/solvent mixture is managed as D001, D007, D008, D035, F003, and F005 hazardous waste (based on GBW's process knowledge) and disposed by Petro-Chem (Detroit, Michigan). See attachment 16 for the August 10, 2016, Uniform Hazardous Waste Manifest. At Hazardous Waste Storage Area 2, I observed one 55-gallon drum of waste paint/solvent mixture (photo 25). The hazardous waste storage drum was ¾ full, in good condition, closed, labeled with the words "Hazardous Waste," marked with the date of accumulation (August 9, 2016), and labeled (flammable liquid) per the DOT. *On the NOV form (NOV 4B), I inadvertently cited 40 CFR 262.32(a) & (b) (not marked per DOT) for the 55-gallon hazardous waste storage drum of waste paint/solvent mixture. On August 9, 2016, the 55-gallon hazardous waste storage drum of waste paint/solvent mixture was not marked (consignee's or cosigner's name and address, etc.) per the DOT. After further review, I determined that the drum was not being transported or offered for off-site transport on August 9, 2016. Therefore, NOV 4B was rescinded.* At the Paint Shop, I observed one 55-gallon drum of waste paint/solvent mixture (photo 23). The hazardous waste satellite accumulation drum was ¼ full, in good condition, closed, and labeled with the words "Paint Waste." **Failure to label a hazardous waste satellite accumulation drum with the words "Hazardous Waste" is in violation of KAR 28-31-262(c)(7)** ***(NOV 7)***. Prior to the completion of the inspection, GBW personnel labeled the 55-gallon hazardous waste satellite accumulation drum of waste paint/solvent mixture with the words "Hazardous Waste" (photo 24).

Waste Paint Related Material - The Paint Shop generates one 55-gallon drum of waste paint related material (waste masking paper/tape, spent Tyvek suits, and spent gloves) per week from railcar painting activities. Mr. Wienmann stated that the waste paint related material is non-hazardous based on process knowledge and disposed of in the general trash. Martin's Trash Service (Effingham, Kansas) disposes of the general trash. At the Paint Shop, I observed one 55-gallon drum storing waste paint related material (photo 28). The drum was ¾ full, open, and unlabeled. I asked Mr. Wienmann if the waste paint related material was contaminated with the same waste paint that was shipped for off-site disposal as D001, D007, D008, D035, F003, and F005 hazardous waste. Mr. Wienmann stated that he did not know. I asked Mr. Wienmann if the waste paint related material would exhibit the characteristics of D001, D007, D008, and D035 and would contain F003 and F005 listed solvents. Mr. Wienmann stated that he did not know. I asked Ms. Jones if GBW had conducted a hazardous waste determination on the waste paint related material for D001, D007, D008, D035, F003, and F005 purposes. Ms. Jones stated "No." **Failure to conduct an adequate hazardous waste determination is in violation of 40 CFR 262.11** ***(NOV 1G)***. During the records review portion of the inspection, Mr. Wienmann provided me with a copy of four Carboline paint SDSs (Carbozinc HS Activator, Carbozine 11 HS Base, Carboguard 992 Part A, and Carboguard 992 Part B) and two Hempel paint SDSs (Hempel's Curing Agent 97580 and Hempadur 15509) for review. From my review of the Carboline paint SDSs (attachments 28, 29, 30, and 31) and Hempel paint SDSs (attachments 32 and 33), it appears that the six spent paints would not contain any RCRA heavy metals. In addition, it appears that the dry waste paint related material contaminated with the six paints would be non-hazardous (if no other hazardous constituents are added to it). I asked Mr. Wienmann if the six above paints were the only paints, primers, or interior lining materials used on-site. Mr. Wienmann stated "No." I informed Mr. Wienmann and Ms. Jones that it would be a good management practice to review the SDS for all of the paints, primers, and interior lining materials for hazardous waste determination purposes.

Paint Booth Filters - The Paint Shop generates 200 spent paint booth filters (12 by 12 inch blanket filters) per month from railcar painting activities. Mr. Wienmann stated that the spent paint booth filters are dry, not contaminated with waste paint/solvent mixture, non-hazardous based on process knowledge, and disposed of in the general trash. Martin's Trash Service (Effingham, Kansas) disposes of the general trash. At the time of the inspection, I did not observe any spent paint booth filters being generated or accumulated on-site. I reviewed the management of the spent paint booth filters and no violations were noted.

MEK Rags - The Paint Shop generates one 5-gallon pail of spent cloth rags contaminated with MEK per month from painting activities. Mr. Wienmann stated that the spent MEK rags are dry, non-hazardous based on process knowledge, and disposed of in the general trash. Martin's Trash Service (Effingham, Kansas) disposes of the general trash. At the Paint Shop, I observed one 5-gallon pail of spent MEK rags (photos 26 and 27). The pail was half-full, in good condition, closed, and unlabeled. From my review of the MEK MSDS (attachment 27), it appears that the spent MEK would contain an F005 listed solvent. I asked Ms. Jones if the spent MEK rags would exhibit the characteristic of MEK (D035) and would contain a F005 listed solvent.

Ms. Jones stated that she did not know. I asked Ms. Jones if GBW had conducted a hazardous waste determination on the spent MEK rags for D035 and F005 purposes. Ms. Jones stated "No." **Failure to conduct an adequate hazardous waste determination is in violation of 40 CFR 262.11** ***(NOV 1J)***. *If it is determined that the spent MEK rags are hazardous waste, GBW would be in violation of KAR 28-31-262(c)(7) (hazardous waste satellite accumulation drum not labeled with the words "Hazardous Waste"), 40 CFR 262.20 (offering hazardous waste for off-site disposal without preparing a uniform hazardous waste manifest), and 40 CFR 268 (land disposal restriction requirements).*

Aerosol Waste - The Paint Shop generates 20 RCRA-empty aerosol cans per month from railcar painting activities and general maintenance activities. The RCRA-empty aerosol paint cans are drained using a puncturing unit attached to one 55-gallon hazardous waste satellite accumulation drum located at the Paint Shop. The punctured and drained aerosol cans are managed as non-hazardous waste (based on GBW's process knowledge) and disposed of in the general trash. Martin's Trash Service (Effingham, Kansas) disposes of the general trash. The aerosol puncturing liquid waste is managed as D001 characteristic hazardous waste (based on GBW's process knowledge). Mr. Wienmann stated that he was not aware of the generation rate and the off-site management of the aerosol puncturing liquid waste. Ms. Jones stated that the aerosol puncturing liquid waste would be disposed by Heritage-Crystal Clean (Kansas City, Kansas). At the Paint Shop, I observed one 55-gallon drum of aerosol puncturing liquid waste (photos 21 and 22). The hazardous waste satellite accumulation drum was 10 gallons full, closed, and labeled with the words "Hazardous Waste." The hazardous waste satellite accumulation drum did not appear to be in good condition (bulging at the top of the drum lid). **Failure to store hazardous waste in a drum that is in good condition is in violation of 40 CFR 265.171** ***(NOV 8B)***.

Spent Blasting Media - The Blast Shop generates one 20-cubic yard roll-off container of spent glass blasting media per month from the interior and/or exterior blasting of tank cars. The spent blasting media is collected in two 55-gallon drums at the baghouse collection unit (photo 20) and the 55-gallon drums are emptied in two 20-cubic yard roll-off containers. Ms. Jones stated that the spent blasting media is non-hazardous based on process knowledge and disposed of by Martin's Trash Service (Effingham, Kansas). At the Spent Blasting Media Storage Area, I observed two 20-cubic yard roll-off containers of spent glass blasting media (photos 15-17). Both 20-cubic yard roll-off containers stored an estimate of 110 gallons each of spent blast media. I asked Ms. Jones if the spent blasting media would exhibit the characteristics of RCRA heavy metals (lead, barium, chromium, etc.). Ms. Jones stated that she did not know. I asked Ms. Jones if GBW had conducted a hazardous waste determination on the spent blasting media for RCRA heavy metal purposes. Ms. Jones stated "No." **Failure to conduct an adequate hazardous waste determination is in violation of 40 CFR 262.11** ***(NOV 1E)***.

D. Paint Storage Boxcar

Kerosene - At the Paint Storage Boxcar, I observed one full 55-gallon drum labeled with the words "Wash Track Used Only" (photos 18 and 19). I asked Mr. Weinmann if he knew the contents inside the drum. Mr. Wienmann stated that the drum stored kerosene. Mr. Weinmann stated that the kerosene was previously used in an old boiler and the boiler was decommissioned at least two years ago. I asked Mr. Weinmann if he knew the length of time of accumulation of the drum. Mr. Weinmann stated that the drum had been in storage for at least one and a half years. I asked Mr. Weinmann if the drum stored waste. Mr. Weinmann stated that he did not know. I asked Mr. Weinmann if the drum stored hazardous waste. Mr. Weinmann stated that he did not know. I asked Ms. Jones if GBW had conducted a hazardous waste determination on the drum. Ms. Jones stated "No." **Failure to conduct a hazardous waste determination is in violation of 40 CFR 262.11** ***(NOV 1H)***.

E. Building 3

NDT Rags - Building 3 personnel generate one full 11¼ by 8¾ by 5 inch corrugated cardboard box of spent cloth rags (NDT rags) contaminated with SKC-S cleaner, SKL-WP2 penetrant, and SKD-S2 developer every two months from non-destructive tests conducted on tank car valves (photos 31-33). Mr. Sanders stated that the spent cloth rags are disposed of in the general trash. Martin's Trash Service (Effingham, Kansas) disposes of the general trash. From my review of the SKC-S cleaner SDS (attachment 24) and SKD-S2 developer SDS (attachment 25), it appears that the spent cleaner and developer would exhibit the characteristic of ignitibility (D001). From my review of the SKL-SP2 penetrant SDS (attachment 26), it appears that the spent penetrant would be non-hazardous (if no other hazardous constituents are added to it). I asked Ms. Jones if the spent NDT rags would exhibit the characteristic of ignitibility (D001). Ms. Jones stated that she did not know. I asked Ms. Jones if GBW had conducted a hazardous waste determination on the spent NDT rags. Ms. Jones stated "No." **Failure to conduct a hazardous waste determination is in violation of 40 CFR 262.11** ***(NOV 1F)***. At the time of the inspection, I did not observe any spent NDT rags being generated or accumulated on-site.

Fluorescent Lamps - At Building 3, I observed one open 4-foot long cardboard box storing four 4-foot long fluorescent lamps (photos 48 and 49). I asked Ms. Jones if the fluorescent lamps were spent. Ms. Jones stated that she did not know. I asked Ms. Jones if she knew the length of time of accumulation of the fluorescent lamps. Ms. Jones stated "No." One of the four fluorescent lamps appeared to be used (dark staining around the tip) and all four fluorescent lamps were covered in dust and grime. I asked Ms. Jones if GBW had conducted a hazardous waste determination on the four 4-foot fluorescent lamps. Ms. Jones stated "No." **Failure to conduct a hazardous waste determination is in violation of 40 CFR 262.11** ***(NOV 1K)***.

Spent Blasting Media - Building 3 personnel use one blasting unit to clean tank car valves (photo 30). Mr. Sanders stated that the blasting unit is operated once per week with glass blasting media. Mr. Sanders stated that he was not aware of the generation rate and on-site/off-site management of the spent blasting media. Mr. Sanders stated that he did not know the last time spent blasting media was removed from the blasting unit.

I informed Ms. Jones that a hazardous waste determination would need to be conducted on any spent blasting media removed from the blasting unit in the future. At the time of the inspection, I did not observe any spent blasting media being generated or accumulated at Building 3. I reviewed the management of the blasting unit and no violations were noted.

Used Oil and Debris - At Building 3, I observed two 5-gallon pails of used oil (photos 46 and 47). One pail was full and the other pail was ¼ full. Both 5-gallon pails were unlabeled. **Failure to label containers of used oil with the words "Used Oil" is in violation of 40 CFR 279.22(c)** ***(NOVs 15A & 15B)***. Mr. Kane stated that the two 5-gallon pails of used oil were generated from the maintenance of one metal fabrication unit (sheer unit) and he was not aware of the generation rate of the used oil. Ms. Jones stated that the used oil would be recycled by Heritage-Crystal Clean (Kansas City, Kansas). At Building 3, I observed one sheer unit and at least 20 yellow absorbent pads on the concrete floor surrounding the sheer unit. I asked Mr. Kane if the sheer unit had a leak. Mr. Kane stated that the sheer unit has a leaking cylinder and the cylinder had been leaking for at least two years. Mr. Kane stated that the sheer unit had not been operated in two weeks. Mr. Kane stated that 10 gallons of oil product is added to the sheer unit per week. On the concrete floor around the sheer unit, I observed a 10 by 10 foot long area of yellow absorbent pads saturated with an oily liquid (photos 34-45). The yellow absorbent pads appeared to contain free liquid and were located on three of four sides of the sheer unit. I asked Mr. Kane if he knew the contents of the oily liquid. Mr. Kane stated that the oily liquid was used oil. It appeared that bulk of the 10 by 10 foot long used oil release area was contained with the yellow absorbent pads. However, I observed one 4 by 5 foot long used oil release area (east of the sheer unit and next to the wall) that was not cleaned-up (photos 40-42). **Failure to clean-up and manage properly a used oil release is in violation of 40 CFR 279.22(d)(3)** ***(NOV 16)***. *After further review, it appears that GBW failed to stop a used oil release and would be in violation of 40 CFR 279.22(d)(1) (this additional finding was not written on the NOV form).* Ms. Jones stated that one roll of oily absorbent pads is generated per month, stored in 55-gallon drums, managed as non-hazardous waste, and disposed by Heritage-Crystal Clean (Kansas City, Kansas). From my review of the 2016 Non-Hazardous Waste Manifests Tracking Summary (attachment 17), it appears that GBW had disposed of 1,200 pounds of oily absorbent pads on August 5, 2016. At the time of the inspection, I did not observe any oily absorbent pads in storage.

Miscellaneous Containers - At Building 3, I observed one full 12-gallon drum labeled with the words "Heavy Duty Acid Cleaner," one ¾ full unlabeled 5-gallon pail, and one 5-gallon pail (one cup full) labeled with the words "Dexron III & Marcos ATF" (photo 50). All three containers were stored in the northwest wall corner. In addition, the 5-gallon pails were stored on top of one 3 by 3 foot long floor drain. I asked Ms. Jones if the three containers stored waste. Ms. Jones stated that she did not know. I asked Ms. Jones if the three containers stored hazardous waste. Ms. Jones stated that she did not know. I asked Ms. Jones if she knew the length of time of accumulation of the three containers. Ms. Jones stated "No." I asked Ms. Jones if GBW had conducted a hazardous waste determination on the three containers. Ms. Jones stated "No." **Failure to conduct a hazardous waste determination is in violation of 40 CFR 262.11** ***(NOVs 1L, 1M, and 1N)***.

F. Facility Wide

Scrap Metal - GBW generates scrap aluminum and steel from railcar maintenance activities. The scrap metal is collected in four 20-cubic yard containers (photo 29) and recycled by Martin's Trash Service (Effingham, Kansas). I reviewed the management of the scrap metal and no violations were noted.

General Trash - General trash includes office paper wastes, lunch wastes, restroom wastes, RCRA-empty aerosol cans, spent PPE, spent NDT rags, waste paint related material, spent paint booth filters, and spent MEK rags. Martin's Trash Service (Effingham, Kansas) disposes of the general trash (once per week) as non-hazardous waste. I reviewed the management of the general trash and violations of 40 CFR 262.11 were noted above.

4.4 Hazardous Waste Storage Areas

GBW has two Hazardous Waste Storage Areas (HWSA) on-site. HWSA 1 is located at the Tank Car Cleaning Area and HWSA 2 is located directly outside the Paint Shop. On August 9, 2016, I observed fifteen 55-gallon hazardous waste storage drums of crude oil waste containing solids at HWSA 1 (photos 3-10, 13, and 14). All 15 drums were closed, 14 drums were full, and one drum was half-full. All 15 drums were not labeled with the words "Hazardous Waste" ***(NOV 6)***. Ten of the 15 drums were marked with the August 4, 2016, accumulation start date. Two of the 15 drums were marked with the August 8, 2016, accumulation start date. Three of the 15 drums were not marked with the accumulation start date ***(NOV 5)***. One of the 15 drums had a severely dented lid (photo 6) ***(NOV 8A)***. The aisle space of 14 of the 15 drums did not appear to allow the unobstructed movement of personnel, fire equipment, or spill control equipment (photos 3, 5, 6, 7, 9, and 10) ***(NOV 10)***. On August 9, 2016, I observed one ½ full 55-gallon hazardous waste storage drum of waste paint at HWSA 2 (photo 25). The drum was in good condition, closed, labeled with the words "Hazardous Waste," marked with the date of accumulation (August 9, 2016), and labeled per DOT. The management of the drum appeared to be satisfactory. GBW's weekly hazardous waste inspections are not documented in a log that contains the inspector's name, date of inspection, time of inspection, and notation of observations ***(NOV 9)***.

4.5 Other Regulatory Requirements

Preparedness and Prevention Requirements - Safety and emergency equipment were present and in satisfactory condition. Appropriate arrangements and coordination have been made with the necessary State and local emergency agencies. I reviewed the preparedness and prevention requirements and no violations were noted.

Manifest and Land Disposal Restriction (LDR) Requirements - The 2014-2016 uniform hazardous waste manifests were on-file and appeared to be satisfactory. LDRs were on-file for the 2014 off-site shipments of hazardous waste to EQ (Tulsa, Oklahoma). However, I did not observe any LDRs on-file for the 2015 and 2016 off-site disposal shipments of crude oil waste and waste paint to Petro-Chem (Detroit, Michigan).

I asked Ms. Jones if GBW had a one-time LDR on-file for the 2015 and 2016 off-site disposal shipments of crude oil waste and waste paint to Petro-Chem (Detroit, Michigan). Ms. Jones stated that she did not know. **Failure to have a one-time LDR notice on-file is in violation of 40 CFR 268.7(a)(2)** ***(NOV 17)***.

Personnel Training - Ms. Jones and Mr. Ryan Diefenbach are GBW's hazardous waste management staff on-site. Ms. Jones stated that she and Mr. Diefenbach are responsible for conducting weekly hazardous waste inspections, signing uniform hazardous waste manifests, and other hazardous waste management responsibilities. I asked Ms. Jones if annual hazardous waste management training was provided to Mr. Diefenbach and herself. Ms. Jones stated that she was not aware of Mr. Diefenbach's training. Ms. Jones stated that her most recent hazardous waste management training consisted of the completion of DOT training. See attachment 34 for the 2015 DOT Training. Ms. Jones stated that she takes DOT training every three years. I asked Ms. Jones if she had taken any hazardous waste management training (including contingency plan implementation) in the past three years. Ms. Jones stated "No." I asked Ms. Jones if GBW had the written job description for each hazardous waste management position and the written description of introductory and continuing hazardous waste management training. Ms. Jones stated that GBW's Human Resources Department had the written job descriptions and she did not have access to them. Ms. Jones stated that GBW did not have a written description of introductory and continuing hazardous waste management training. From my review of the personnel training requirements, it appears that GBW had not established and completed a hazardous waste management training program. **Failure to establish and complete a hazardous waste management training program is in violation of 40 CFR 265.16(a)(1)** ***(NOV 11)***.

Contingency Plan - I reviewed the contingency plan (attachment 35) and it was up to date. The contingency plan was updated on February 24, 2016, and August 10, 2016 (during the time of the inspection). I asked Ms. Jones if GBW had provided a copy of the February 24, 2016, contingency plan revision to the local emergency response agencies (police department, fire department, hospital, emergency response teams). Ms. Jones stated that the revision was only provided to the fire department. **Failure to provide the revised contingency plan to emergency agencies is in violation of 40 CFR 265.53(b)** ***(NOV 13)***. The contingency plan did not list the addresses of Emergency Coordinators (Ms. Jones and Mr. Schaffer). **Failure to list the addresses of the Emergency Coordinators in the contingency plan is in violation of 40 CFR 265.52(d)** ***(NOV 12)***.

5.0 SUMMARY OF FINDINGS

NOV 1 - Failure to conduct a hazardous waste determination is in violation of 40 CFR 262.11.

A. Fifteen hundred gallons of non-crude oil wastewater generated per month (Wastewater Storage Area).
B. One 55-gallon drum of spent PPE (gloves and Tyvek suites) generated per month (Equipment Boxcar).
C. One full 10-gallon drum of an unknown liquid (Equipment Boxcar).

D. Crude oil waste not containing solids (Wastewater Storage Area).
E. One 20-cubic yard roll-off container of spent glass blasting media generated per month (Blast Shop).
F. Twenty spent NDT rags generated per month (Building 1) and one full 11¼ by 8¾ by 5 inch corrugated cardboard box of spent NDT rags every two months (Building 3).
G. One 55-gallon drum of waste paint related material (waste masking paper/tape, spent Tyvek suits, and spent gloves) generated per week (Paint Shop).
H. One full 55-gallon drum of kerosene (Paint Storage Boxcar).
I. One 20-gallon parts washer unit storing waste solvent (Building 1).
J. One 5-gallon pail of spent MEK rags generated per month (Paint Shop).
K. One open 4-foot long cardboard box storing four 4-foot long fluorescent lamps (Building 3).
L. One full 12-gallon drum labeled with the words "Heavy Duty Acid Cleaner" (Building 3).
M. One ¾ full unlabeled 5-gallon pail of unknown liquid (Building 3).
N. One 5-gallon pail (one cup full) labeled with the words "Dexron III &Marcos ATF" (Building 3).
O. The November 10, 2015, shipment of 4,675 pounds of acetone/toluene waste to Heritage-Crystal Clean.

NOV 2 - Failure to provide updated notification to the KDHE within 60 days is in violation of KAR 28-31-4.

NOV 3 - Failure to label hazardous waste storage containers per the DOT is in violation of 40 CFR 262.31. *On the NOV form (NOV 3), I inadvertently cited 40 CFR 262.31 (not labeled per DOT) for fifteen 55-gallon hazardous waste storage drums of crude oil waste containing solids. NOV 3 was rescinded.*

NOV 4 - Failure to label hazardous waste storage containers per the DOT is in violation of 40 CFR 262.32(a) & (b). *On the NOV form (NOVs 4A and 4B), I inadvertently cited 40 CFR 262.32(a) & (b) (not marked per DOT) for the fifteen 55-gallon hazardous waste storage drums of crude oil waste containing solids and one 55-gallon gallon drum of waste paint. NOVs 4A and 4B were rescinded.*

NOV 5 - Failure to mark hazardous waste storage containers with the accumulation start date is in violation of 40 CFR 262.34(a)(2).

<u>Wash Track</u>
Three 55-gallon hazardous waste storage drums of crude oil waste containing solids.

NOV 6 - Failure to label hazardous waste storage drums with the words "Hazardous Waste" is in violation of 40 CFR 262.34(a)(3).

Wash Track
Fifteen 55-gallon hazardous waste storage drums of crude oil waste containing solids.

NOV 7 - Failure to label a hazardous waste satellite accumulation drum with the words "Hazardous Waste" is in violation of KAR 28-31-262(c)(7).

Building 3
One 55-gallon hazardous waste satellite accumulation drum of waste paint/solvent mixture.

NOV 8 - Failure to store hazardous waste in drums that are in good condition is in violation of 40 CFR 265.171.

A. One 55-gallon hazardous waste storage drum of crude oil waste containing solids (Waste Track Area).
B. One 55-gallon hazardous waste satellite accumulation drum of aerosol puncturing liquid waste (Paint Shop).

NOV 9 - Failure to document weekly hazardous waste inspections is in violation of 40 CFR 265.15(d).

NOV 10 - Failure to provide adequate aisle space for the unobstructed movement of personnel, fire protection, and spill control equipment is in violation of 40 CFR 265.35.

NOV 11 - Failure to establish and complete a hazardous waste management training program is in violation of 40 CFR 265.16(a)(1).

NOV 12 - Failure to list the addresses of the Emergency Coordinators in the contingency plan is in violation of 40 CFR 265.52(d).

NOV 13 - Failure to provide the revised contingency plan to emergency agencies is in violation of 40 CFR 265.53(b).

NOV 14 - Failure to store used oil in containers that are in good condition is in violation of 40 CFR 279.22(b).

A. One 250-gallon AST of used oil (severely rusted tank body and deep crease in the tank body) (Building 1).
B. One 55-gallon used oil storage drum of used oil filters (severely rusted and dented drum lid) (Building 1).

NOV 15 - Failure to label containers of used oil with the words "Used Oil" is in violation of 40 CFR 279.22(c).

A. One full 5-gallon pail of used oil (Building 3).
B. One ¼ full 5-gallon pail of used oil (Building 3).

NOV 16 - Failure to clean-up and manage properly a used oil release is in violation of 40 CFR 279.22(d)(3).

NOV 17 - Failure to have a one-time LDR notice on-file is in violation of 40 CFR 268.7(a)(2).

**Finding not listed on the Notice of Violation form - Failure to stop a used oil release (Building 3 sheer unit leaking used oil) is in violation of 40 CFR 279.22(d)(1).*

Other than the items specifically noted in this narrative, I observed no additional issues or potential violations. However, further EPA review may change or add to my findings.

Michael J. Martin
Physical Scientist
Date: September 9, 2016

Attachments

1) *Region 7 Multi-Media Screening Checklist* (2 pages)
2) Facility Layout (1 page)
3) KDHE *Hazardous Waste Generator Compliance Inspection Checklist* (17 pages)
4) *Confidentiality Notice* (1 page)
5) *Receipt for Documents and Samples* (2 pages)
6) *Notice of Violation* (8 pages)
7) EPA RCRA Handler Information Report (2 pages)
8) 2015 Hazardous Waste Report (67 pages)
9) 2016 Hazardous Waste Manifests Tracking Summary (3 pages)
10) Wolverine Terminals Heavy Crude Oil MSDS (9 pages)
11) Peace River Seal Heavy Crude Oil MSDS (12 pages)
12) NanoDissolve Gel SDS (5 pages)
13) Green Plain Denatured Ethanol SDS (9 pages)
14) Pacific Denatured Ethanol SDS (14 pages)
15) Hempel's Light Clean SDS (9 pages)
16) August 10, 2016 Uniform Hazardous Waste Manifest (3 pages)
17) 2016 Non-Hazardous Waste Manifests Tracking Summary (3 pages)
18) Work Order 8MM5M (2 pages)
19) Ethanol/LPG Wastewater Written Waste Determination Documentation (22 pages)
20) November 13, 2014 Bill of Lading (3 pages)
21) November 10, 2015 Bill of Lading (4 pages)
22) Five 2014 MEK/Diesel Uniform Hazardous Waste Manifests (24 pages)
23) June 19, 2015 Uniform Hazardous Waste Manifest (4 pages)
24) SKC-S Cleaner SDS (3 pages)
25) SKD-S2 Developer SDS (10 pages)
26) SKL-SP2 Penetrant SDS (10 pages)
27) MEK MSDS (6 pages)
28) Carbozinc HS Activator SDS (9 pages)
29) Carbozine 11 HS Base SDS (10 pages)
30) Carboguard 992 Part A SDS (10 pages)
31) Carboguard 992 Part B SDS (11 pages)
32) Hempel's Curing Agent 97580 SDS (10 pages)
33) Hempadur 15509 SDS (10 pages)
34) 2015 DOT Training (3 pages)
35) Contingency Plan (16 pages)

Photo Log (6 pages)
Photographs (31 pages/59 photos)

Forward To: EJ ☐ EPCRA / RMP / TSCA ☑ CWA ☐ Wetlands ☐ UIC ☐ PWS ☐ CAA / CFC ☐ RCRA ☑ UST ☐ SPCC ☐

REGION VII MULTIMEDIA SCREENING CHECKLIST

Facility Name: GTW Railcar Services
Facility Ownership: GTW Railcar Services
Street: 15624 258th Road
City: Cummings State: KS Zip: 66016
Phone: (866) 785-4082 Facility Contact: Andrea Jones
Number of Employees: 30 Work Hours/Shifts 6am - 2:30pm Mon-Fri. Facility Subject to OSHA regulations Yes ☑ No ☐

Inspector Michael J. Martin
Primary Media: RCRA
Inspector Phone Ext.: 7149
Date: 08/09-11/2016
SIC/NAICS Code 488210

Main facility activity, major process chemical(s) & description: Railcar Maintenance.

(**Check all that apply**): painting/coating (water-based ☐, solvent-based ☑), printing ☐, reacting ☐, formulating ☐, distilling ☐, water treatment ☐, refrigeration ☐, manufacturing ☐, parts washers/degreasing (water-based ☐, halogenated-based ☐, non-halogenated-based ☐), combustion (boiler, furnaces, oxidizers) ☐ plating (chrome ☐, other_____).

ENVIRONMENTAL JUSTICE (Note: Forward to EJ if a concern is identified during your inspection)

1. Is the facility located in an apparent low income area (e.g., with many abandoned and dilapidated properties)? No ☑ (stop) Yes ☐
   If yes, is facility less then 1000 feet from nearest routinely occupied property (house, school, etc.)? No ☐ (stop) Yes ☐ *Forward to EJ*

EMERGENCY PLANNING & COMMUNITY RIGHT TO KNOW ACT (EPCRA) & TOXIC SUBSTANCE CONTROL ACT (TSCA)

1. Did facility file a Tier II report with fire department, Local & State Emergency Planning Committee? Yes ☑ No ☐ *Forward to EPCRA*
2. Did facility manufacture, import, or process (formulate, blend, package) >25,000 lbs of a chemical or >100 lbs of a Persistent Bioaccumulative Toxin (lead, mercury, or polycyclic aromatic compounds) at any time over the last 5 years? No ☑ (stop) Yes ☐ *Forward to EPCRA*
3. Has the facility: *If any box in question 3 is marked - Forward to EPCRA*
   a. Stored ≥500 lbs of ammonia ☐, ≥100 lbs of chlorine ☐, or ≥10,000 lbs of an industrial chemical ☐, at any time over the last 2 years? ☐
   b. Stored ≥10,000 lbs of pressurized flammable material (propane, methane, butane, pentane, etc.) at any time over the last 2 years? ☐
   c. Used ≥10,000 lbs of ammonia ☐, chlorine ☐, halogenated solvents ☐, solvent-based paints ☐, or solvents ☐, or nitrated compound, over the last calendar year? ☐
   d. Generated ≥ one half pound of metal dusts, fumes, or metal turnings, over the last calendar year? ☑
4. Does the facility have any oil filled electrical equipment No ☑ (stop) Yes ☐ *Forward to TSCA and ask* Has facility tested oil filled equipment to determine PCB content; No ☐ Yes ☐ number containing PCBs greater than 50 ppm 0 and percent of all equipment tested 100%. Is equipment leaking (including wet or weeping equipment)? No ☑ Yes ☐ – *Get Photo*

CLEAN WATER ACT (CWA) - National Pollution Discharge Elimination System (NPDES), Industrial Pretreatment, Storm Water, & Wetlands

1. Does the facility discharge any wastewater to storm sewers, surface water, or the land? No ☑ (stop) Yes ☐
   If yes, are all wastewater discharges permitted? Yes ☐ No ☐ *Forward to CWA*
2. Does the facility have process wastewaters that are discharged to a city POTW (Publicly Owned Treatment Works)? No ☑ (stop) Yes ☐
   If yes, are the discharges permitted by: State? ☐, City? ☐ – If yes, Stop here. No ☐ *Forward to CWA*
   If yes, does the city have a state or EPA approved pretreatment program? Yes ☐ No or Don't Know ☐ *Forward to CWA*
3. During rainfall events, can storm water carry pollutants from manufacturing, processing, storage, disposal, shipping and receiving areas, or from construction sites >1 acre, to storm sewers or surface water? No ☑ (stop) Yes ☐
   If yes, does the facility have an NPDES permit for these storm water discharges? Yes ☐ No ☐ *Forward to CWA*
4. Did you see any wastewater discharges not identified by the facility? No ☑ (stop) Yes ☐ - Identify location, time, appearance of discharge: _____ (*Get Photo*) *Forward to CWA*
5. Does the facility have any wetland areas (e.g. streams, ponds, or temporarily wet areas)? No ☑ (stop) Yes ☐
   If yes, have any wetland areas been dredged, filled, channelized, dammed, or had gravel removed from them within the last 5 years?
   No ☐ (stop) Yes ☐ - Identify location and timeframe_____ (*Get Photo*) *FWD to Wetlands*

Version 08.23.05a GRAY SHADED AREAS INDICATE ITEMS **YOU** NEED TO **LOOK** FOR DURING VISUAL INSPECTION

SAFE DRINKING WATER ACT (SDWA) - Underground Injection Control (UIC) & Public Water System (PWS)

1. Does facility discharge any liquids to the subsurface (septic systems, disposal wells, cesspools, etc.)? No ☑ (stop) Yes ☐ *Forward to UIC*
   If yes, do these liquid wastes consist of sanitary wastewater only? Yes ☐ No ☐
2. Does facility provide drinking water to 25 people or more from its own source (private well, pond, etc)? No ☑ (stop) Yes ☐ *Forward to PWS*
   If yes, does the facility test or monitor its drinking water in order to comply with state regulations? Yes ☐ No ☐

CLEAN AIR ACT (CAA) and CFCs

1. Do you see any dense, non-steam, smoke or dust emissions leaving the facility property? No ☑ Yes ☐ *Forward to CAA*
   Source_____ (*Get Photo*)
2. Does the facility have any new air pollution emitting equipment that was constructed or installed in the past 5 years? No ☑ (stop) Yes ☐
   If yes, is equipment permitted? Yes ☐ No ☐ *Forward to CAA Describe:*_____
3. Does the facility have any cooling units that contain >50 lbs of refrigerant? No ☑ (stop) Yes ☐ *Forward to CFC*
   If yes, are these units: Self-serviced? ☐ Contract Serviced? ☐ - Service Company:_____
4. Does the facility have a refrigeration process that contains more than 10,000 lbs of ammonia ? No ☑ (stop) Yes ☐ *Forward to EPCRA/RMP*
5. Does the facility service motor vehicle air conditioning systems? No ☑ (stop) Yes ☐ *Forward to CFC*

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) and UNDERGROUND STORAGE TANKS (UST)

1. Does the facility generate more than 30-gallons (220 lbs./100kg) of hazardous waste per month or at any one time? No ☐ (stop) Yes ☑
   If yes, does facility have an EPA Hazardous Waste Identification Number? Yes ☑ (stop) No ☐ *Forward to RCRA*
2. Is hazardous waste treated ☐ , stored >90-days ☐, burned ☐ , land filled ☐ , put in surface impoundments ☐ or waste piles ☐ ?
   No ☑ (stop) Yes ☐ If yes, is the facility permitted for above described activity? Yes ☐ No ☐ *Forward to RCRA*
3. Did you see or does the facility have any large quantities of materials **that the facility claims to be non-hazardous waste material** (>10 drums, roll-offs, waste piles, etc. – exclude clean office trash, cardboard, & packaging type wastes)? No ☑ (stop) Yes ☐

Material Claimed To Be Non-Hazardous	How does the facility know these wastes are non-hazardous?
_____	Testing, industry or manuf. info.., MSDS, etc. ☐ ; None available ☐ *Forward to RCRA*
_____	Testing, industry or manuf. info.., MSDS, etc. ☐ ; None available ☐ *Forward to RCRA*
_____	Testing, industry or manuf. info.., MSDS, etc. ☐ ; None available ☐ *Forward to RCRA*
_____	Testing, industry or manuf. info.., MSDS, etc. ☐ ; None available ☐ *Forward to RCRA*
_____	Testing, industry or manuf. info.., MSDS, etc. ☐ ; None available ☐ *Forward to RCRA*

4. Did you see any leaking hazardous waste containers, drums, or tanks? No ☑ Yes ☐ *Forward to RCRA*
   Describe:_____ (*Get Photo*)
5. Did you see any signs of spills or releases (e.g., dead or stressed vegetation, stains, discoloration)? No ☐ Yes ☑ *Forward to RCRA*
   Describe: Used oil release 10 by 10 ft Bldg 3 Fabrication Machine (*Get Photo*)
6. Did you see any chemical or waste handling practices that concern you (access to children/public)? No ☐ Yes ☐ *Forward to RCRA &* **EPCRA** Describe:_____ (*Get Photo*)
7. Does the facility have any past or present underground petroleum product or hazardous material tanks? No ☑ Yes ☐ *Forward to UST*
8. Does the facility have any underground fuel tanks for emergency generators? No ☑ Yes ☐ *Forward to UST*

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN (SPCC)

1. Does the facility have any aboveground oil tanks (petroleum, synthetic, animal, fish, vegetable), with an aggregate volume >1,320 gallons?
   No ☑ (stop) Yes ☐ - Does the facility have a certified SPCC Plan? Yes ☐ No ☐ *Forward to SPCC*
   If yes, are there secondary containment systems for the tanks? Yes ☐ No ☐ *Forward to SPCC*
   If yes, are any tanks leaking where oil could reach waters of the State or U.S.? No ☐ Yes ☐ (*Get Photo*) *Forward to SPCC*

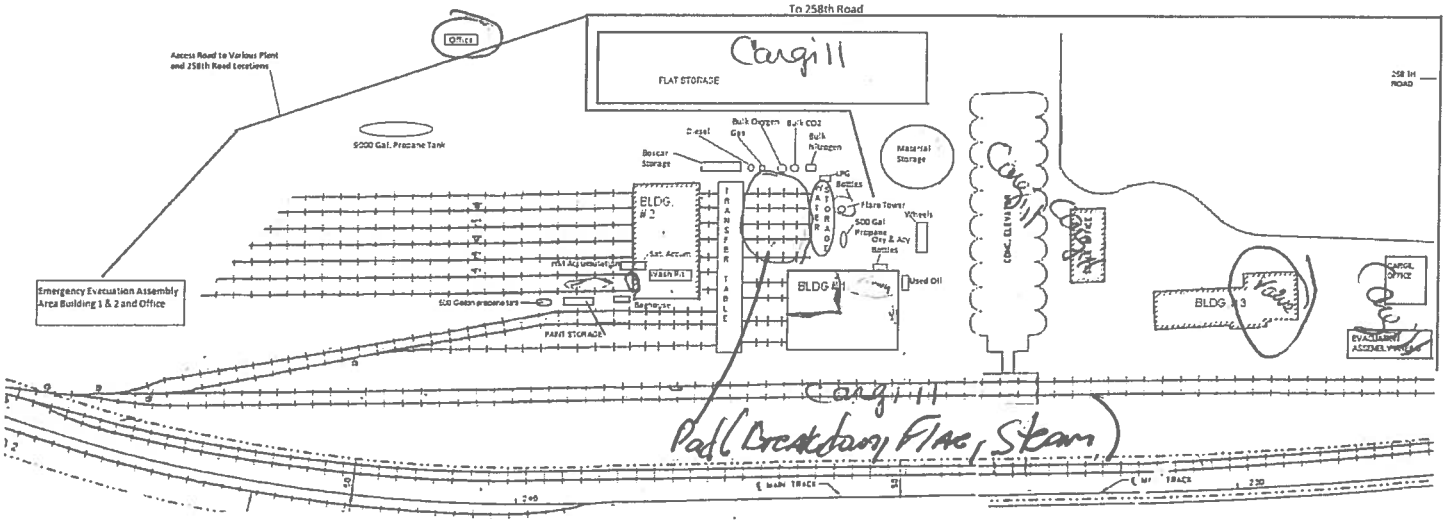
ENVIRONMENTAL MANAGEMENT SYSTEMS (EMS)

1. Does your facility have an EMS? No ☐ Yes ☑
2. Is the facility's EMS ISO 14001 certified? No ☑ Yes ☐

** PLEASE TAKE PHOTOS TO DOCUMENT POTENTIAL PROBLEMS*

Version 08.23.05a GRAY SHADED AREAS INDICATE ITEMS **YOU** NEED TO **LOOK** FOR DURING VISUAL INSPECTION

GBW SITE PLAN & EMERGENCY EVACUATION AREAS



GBW EMERGENCY ASSEMBLY AREAS for BUILDINGS 1, 2, 3 and OFFICE

KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT
BUREAU OF WASTE MANAGEMENT
BUREAU OF ENVIRONMENTAL FIELD SERVICES

HAZARDOUS WASTE COMPLIANCE INSPECTION REPORT

Facility Information

EPA/ ID/Permit No. KSD043936277 Number of Employees 30

Facility Name GBW Railcar Services, LLC District Southeast

Street 15624 258th Road City Cummings ,KS ZIP 66016

Mailing Address (if different than above) _____

County Atchison e-mail _____

Phone (866) 785-4082 Cell Phone _____ Fax _____

Operating Hours and Days 6:00 a.m. to 2:30 p.m., Monday through Friday

Type of Business Railcar Maintenance

Were GPS coordinates previously taken for this facility and recorded in the appropriate database?
☐ Yes ☐ No

If no, did you take the GPS coordinates for this facility and record them in the appropriate database
☐ Yes ☐ No

Generator Classification: ☐ Closed/Inactive ☐ CESQG ☐ KSQG ☐ SQG ☒ LQG
☐ Not a Generator

If the facility is inactive and/or closed, please provide an explanation under Facility Description.

Other Regulated Activities: ☐ T/S/D Facility ☐ Tank System ☐ Subpart BB
(Complete applicable reports) ☒ Universal Waste Activities ☐ Transporter

Does the facility have a total above-ground storage capacity of used oil (excluding containers less than 55-gallons) of more than 1,320 gallons? ☐ Yes ☒ No ☐ NA

If yes, then the facility is subject to SPCC requirements due to used oil activities.
Does the facility have a SPCC Plan? ☐ Yes ☐ No ☒ NA
Did you inform the facility they are subject to SPCC ☐ Yes ☐ No ☒ NA

Facility Used Oil Activities (Attach a checklist for each one marked):

☒ Generator
☐ Transporter / Transfer Facility
☐ Used Oil Burner (Off-Spec Fuel)
☐ Collection Center / Aggregation Point
☐ Used Oil Processor / Re-Refiner
☐ Used Oil Marketer

No Used Oil Activities ☐

Inspection Information ☒ Routine ☐ Complaint

Inspection Time 9:36 a.m. Date(s) August 9-11, 2016

Name of person completing this report: Michael J. Martin

Inspection Participants (Include name of inspector(s)):

Name	Title	Company/ Agency	Participated In (Check all that apply)				Comments
			Intro Meeting	Walk-Through	Records Review	Exit Briefing	
Michael J. Martin	Env. Scientist	USEPA	✓	✓	✓	✓	
Andrea Jones	EHS Mgr.	GBW	✓	✓	✓	✓	
Frank Pfeifer	Corporate EHS Mgr.	GBW	✓	✓	✓	✓	
Ryan Schaffer	Plant Mgr.	GBW	✓			✓	

Has the company declared any information/processes as trade secrets KSA 65-3447? ☐ Yes ☒ No
If yes, explain:

Has this facility been previously inspected by EPA and/or KDHE? ☒ Yes ☐ No
If yes, please summarize the following:

Date	Agency	Description of Violation (do not need to include reg. citations or comments)
01/16/13	KDHE	See the 01/16/13 Report

Changes since the previous inspection: (Please provide a brief description of any significant process, waste, management, ownership, or other pertinent changes since the previous inspection. If no previous inspection, this section should be blank.)

N/A

Facility Description: (# of buildings, approximate size of each building, basic activity in each building, processes, etc.), if not already described in previous reports or in changes since previous inspection section of this report:

N/A

Additional Information: (Include pertinent information from this inspection that does not pertain to violations or comments and is not already discussed in other sections)

N/A

Exit Conference:
Date of Exit Conference: August 11, 2016

Were all violations, comments, corrective actions, and response due dates discussed with the facility if applicable? ☒ Yes ☐ No

Was the possibility of additional violations and possible enforcement discussed with the facility? ☒ Yes ☐ No

Were the generator status and applicable regulatory requirements discussed with the facility during the exit briefing and/or previously during the inspection? ☒ Yes ☐ No

List of items provided to facility:
NOC/NONC ☐ Yes ☒ No
BWM CD ☐ Yes ☒ No
Container Posters ☐ Yes ☒ No
Other (list): _____

Summary of additional information presented to facility during exit conference:

List of Attachments:

#	Description of Attachments (List Photolog as last attachment if applicable)
1	
2	
3	

Violations and Comments

Were Violations cited: ☒ Yes ☐ No
Were written comments made: ☐ Yes ☒ No

Provide a detailed description of each violation and comment, including photo references, attachment references, and regulatory citations below:

*See the 08/09-11/2016 Inspection Report

WASTE STREAM TABLE

(List all hazardous wastes first, followed by solid wastes.)

Waste Description or Process	Waste Type (HW, SW, UW, UO, EX, ND)	If HW, list all codes	Waste Det. Method (PK, AD, or ND)	Waste Amount Generated Per Month		Waste Amount Presently in Storage	Oldest Accumulation Start Date	Present Waste Disposal Location (list name of destination facility and if not clear, put type of facility (MSWLF, TSDF, WWTF, etc.)
				Amount	Units			
Crude Oil Waste Containing Solids	HW	D001 D018	PK	4,000 to 8,000	Pounds	Fifteen 55-gallon drums	08/08/16	Petro-Chem (Detroit, Michigan)
Crude Oil Waste Not Containing Solids	ND	NA	NA	1,600 lbs on 07/05/16	Pounds	One 55-gallon drum	NA	Heritage-Crystal Clean (Kansas City, Kansas)
Non-Crude Oil Wastewater	ND	NA	NA	1,500	Gallons	One 3,500 AST	NA	Heritage-Crystal Clean (Kansas City, Kansas)
Soybean Oil & Palm Oil	SW	NA	PK	Soybean oil – 1,200 lbs in 2016 and Palm oil – 3,400 lbs in 2016	NA	NA	NA	Heritage-Crystal Clean (Kansas City, Kansas)
PPE	ND	NA	NA	One 55-gallon drum	NA	One ¾ full 55-gallon drum	NA	Martin's Trash Service (Effingham, Kansas)
NDT Rags	ND	NA	NA	Bldg. 1 – 20 rags Bldg. 3 – one box	NA	NA	NA	Martin's Trash Service (Effingham, Kansas)

WASTE STREAM TABLE

Waste Description or Process	Waste Type (HW, SW, UW, UO, EX, ND)	If HW, list all codes	Waste Det. Method (PK, AD, or ND)	Waste Amount Generated Per Month		Waste Amount Presently in Storage	Oldest Accumulation Start Date	Present Waste Disposal Location (list name of destination facility and if not clear, put type of facility (MSWLF, TSDF, WWTF, etc.)
				Amount	Units			
Parts Washer Solvent	ND	NA	NA	NA	NA	NA	NA	NA
Used Oil	UO	NA	NA	15	Gallons	One 250-gallon AST	NA	Heritage-Crystal Clean (Kansas City, Kansas
Used Oil Filters	UO	NA	NA	5	Filters	One 55-gallon drum	NA	Heritage-Crystal Clean (Kansas City, Kansas
Lead-Acid Batteries (managed per 40 CFR 266 Subpart G)	EX	NA	NA	NA	NA	NA	NA	O'Reilly Auto Parts (Atchison, Kansas)
Waste Paint/Solvent Mixture	HW	D001 D007 D008 D035 F003 F005	PK	500 to 2,000	Pounds	One ¾ full 55-gallon drum	08/09/16	Petro-Chem (Detroit, Michigan)
Waste Paint Related Material	ND	NA	NA	One 55-gallon drum per week	NA	One ¾ full 55-gallon drum	NA	Martin's Trash Service (Effingham, Kansas)
Paint Booth Filters	SW	NA	PK	200	Filters	NA	NA	Martin's Trash Service (Effingham, Kansas)

Attachment 3 Page 5 of 17

WASTE STREAM TABLE

Waste Description or Process	Waste Type (HW, SW, UW, UO, EX, ND)	If HW, list all codes	Waste Det. Method (PK, AD, or ND)	Waste Amount Generated Per Month		Waste Amount Presently in Storage	Oldest Accumulation Start Date	Present Waste Disposal Location (list name of destination facility and if not clear, put type of facility (MSWLF, TSDF, WWTF, etc.)
				Amount	Units			
MEK Rags	ND	NA	NA	One 5-gallon pail	NA	One ½ full 5-gallon pail	NA	Martin's Trash Service (Effingham, Kansas)
Aerosol Waste	HW	D001	PK	NA	NA	NA	NA	Heritage-Crystal Clean (Kansas City, Kansas)
RCRA-Empty Aerosol Cans	SW	NA	PK	20	Can	NA	NA	Martin's Trash Service (Effingham, Kansas)
Spent Blasting Media	ND	NA	NA	One 20-cubic yard roll-off	NA	110 Gallons	NA	Martin's Trash Service (Effingham, Kansas)
Fluorescent Lamps	ND	NA	NA	NA	NA	4 Lamps	NA	NA
Scrap Metal	NA	NA	NA	NA	NA	One 20-cubic yard roll-off	NA	Martin's Trash Service (Effingham, Kansas)
General Trash	NA	NA	NA	NA	NA	NA	NA	Martin's Trash Service (Effingham, Kansas)

AD = Analytical Data HW = Hazardous Waste EX = Exempt (includes CUP, laundered rags, etc.)
SW = Solid Waste UW = Universal Waste ND = Not Determined UO = Used Oil

HAZARDOUS WASTE GENERATOR COMPLIANCE INSPECTION REPORT

GENERAL REQUIREMENTS (GGR)

		YES	NO	NAV#
1.	Has the generator evaluated each potentially hazardous waste to determine if it is hazardous? **40 CFR 262.11**	☐	☒	
	a. If waste was tested, was the analysis conducted by a laboratory certified by KDHE? **KAR 28-31-262(c)(2)**	☐	☐	☒
	b. If waste was not tested, did the generator use knowledge of the hazardous characteristics of the waste in light of the materials or processes used? **40 CFR 262.11(c)(2)**	☐	☐	☒
	c. Is documentation of the waste determination kept for three years from the date the waste was last sent to on-site or off-site treatment, storage or disposal? **40 CFR 262.40(c)**	☐	☐	☒
2.	If hazardous waste is disposed of via the sanitary sewer to a Publicly Owned Treatment Works (POTW), has the generator received written approval from the City - POTW?	☐	☐	☒
3.	Has the facility obtained a Special Waste Disposal Authorization (SWDA) for each special waste? **KAR 28-29-109(c)**	☐	☐	☒
4.	If the generator treats or recycles hazardous waste on-site (such as in a still), do they count waste correctly? **40 CFR 261.5(d)(2)**	☐	☐	☒
	a. If the waste is not counted, is it exempt because of a closed-loop system?	☐	☐	☒
5.	Has the KSQG, SQG, or LQG notified KDHE and obtained an EPA Identification Number? **40 CFR 262.12(a)** (Mark NA only for CESQG)	☒	☐	☐
6.	Is current notification accurate? (Updates must be made within 60 days of the change) **KAR 28-31-4**	☐	☒	☐

UNIVERSAL WASTE

7.	Does the facility choose to manage some of its waste as universal waste? If no, skip this section. If yes, check each type of universal waste that applies: ☐ **batteries** ☐ **mercury-containing equipment** ☐ **pesticides** ☐ **lamps**	☐	☒	
8.	Is the facility a small quantity handler of universal waste (accumulates <11,000 lbs or <5,000 kgs)? If the facility is a large quantity handler of universal waste, explain under "additional information" and skip the remaining questions in this section. These questions are designed only for small quantity handlers of universal waste.	☐	☐	
9.	If the facility manages mercury-containing equipment, do they remove mercury-containing ampules from equipment?	☐	☐	☐
	If yes, are the requirements of 40 CFR 273.13(c)(2) met? (These include using secondary containment during the removal, having a mercury spill kit available, training employees, and other requirements.) **40 CFR 273.13(c)(2)**	☐	☐	☐

	YES	NO	NA	V#
10. Are all universal wastes managed in closed containers that are structurally sound, adequate to prevent breakage, compatible with the contents of the container, lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions?				
a. Batteries (only damaged or leaking batteries must be contained) **40 CFR 273.13(a)(1)**	☐	☐	☒	
b. Pesticides **40 CFR 273.13(b)(1)**	☐	☐	☒	
c. Mercury-containing equipment **40 CFR 273.13(c)(1)**	☐	☐	☒	
d. Lamps **40 CFR 273.13(d)(1)**	☐	☐	☒	
11. Is each container (or unit if not containerized) marked appropriately with one of the following phrases (substitute the appropriate universal waste for the blank)?: "Universal Waste-_____", or "Waste _____" or "Used _____"?				
a. Batteries (only damaged or leaking batteries must be contained) **40 CFR 273.14(a)**	☐	☐	☒	
b. Pesticides **40 CFR 273.14(c)** Note: cannot use the words "Used Pesticides"	☐	☐	☒	
1. Is the original pesticide label or other approved label, also present?	☐	☐	☒	
c. Mercury-containing equipment (the word "thermostat" can be substituted for the words "containing equipment") **40 CFR 273.14(d)**	☐	☐	☒	
d. Lamps **40 CFR 273.14(e)**	☐	☐	☒	
12. Can the accumulation time (date became a waste or from receipt date) be demonstrated by date on container, date in accumulation area, date on individual waste items, inventory system, or other method? **40 CFR 273.15(c)**	☐	☐	☒	
13. Have employees been trained on proper management of universal waste? **40 CFR 273.16**	☐	☐	☒	
14. Has there been a release of universal waste at this facility?	☐	☐	☒	
If yes, was it cleaned up and a proper waste determination made on the cleaned up material? **40 CFR 273.17(b)**	☐	☐	☒	
15. Is universal waste sent to another universal waste handler or a destination facility? **40 CFR 273.18(a)**	☐	☐	☒	
a. Has a shipment sent by this handler ever been rejected? (if yes, explain in additional information section.)	☐	☐	☒	
b. Has a shipment been sent to a foreign destination? (if yes, explain in additional information section.)	☐	☐	☒	

Note: Small quantity handlers are not required to keep records of shipments of universal waste.

GENERATOR REQUIREMENTS

	YES	NO	NA	V#
16. Is the CESQG recycling, treating, or disposing of hazardous waste on-site in an acceptable manner? **40 CFR 261.5(g)**	☐	☐	☒	

If yes, describe _____
(If described on the waste stream table, don't repeat here.)

17. If the CESQG is accumulating less than 55 lbs (25 kgs) of hazardous waste on-site, is the CESQG sending this waste off-site for treatment, storage, or disposal according to? **40 CFR 261.5(g)**	☐	☐	☒	

If yes, describe _____
(If described on the waste stream table, don't repeat here.)

(If Non-Accumulating CESQG, stop here)

		YES	NO	NA	V#
18.	If the CESQG is accumulating 55 lbs (25 kgs) or more of hazardous waste, is the CESQG sending waste off-site for treatment, storage, or disposal, to a TSD or some other approved waste management facility (HHW)? **KAR 28-31-262a(f)(2)(B)**	☐	☐	☒	
19.	Does generator package, label (flammable liquid, poison, etc.), and mark (consignee's or consignor's name and address, etc.) waste in accordance with the requirements outlined in 49 CFR Parts 172, 173, 178, and 179 (DOT)? **40 CFR 262.30 (package), 40 CFR 262.31 (label), 40 CFR 262.32(a) and (b) (mark)**	☒	☐		
20.	Does the generator only use a transporter who has registered with KDHE and obtained an EPA Identification Number? **KAR 28-31-262a(a)(2)**	☒	☐		

CONTAINER MANAGEMENT REQUIREMENTS

NOTE: SAA refers to Satellite Accumulation Area. SAAs do not apply to CESQGs, whose containers must all meet storage requirements.

21.	For the SAA, is 55-gallons or less of each waste stream accumulated at or near the point of generation, in one container, which is under the control of the operator of the process generating that waste? **KAR 28-31-262(c)(6)**	☐	☐		
22.	Is each container managed as a storage container within three days of no longer meeting the definition of a satellite container? **40 CFR 262.34(c)(2)** [Note: If this satellite container violation is cited, do not cite storage container violations (weekly inspections and accumulation start date) for the same containers.]	☐	☐	☒	
23.	Is the accumulation start date marked on each storage container? **40 CFR 262.34(a)(2)**	☐	☒	☐	
24.	Is each container clearly marked with the words "Hazardous Waste"? **40 CFR 262.34(a)(3)** [storage] **or KAR 28-31-262(c)(7)** [SAA]	☐	☒	☐	
25.	Are all containers holding hazardous waste in good condition? **40 CFR 265.171**	☐	☒	☐	
26.	Are all containers holding hazardous waste compatible with the contents? **40 CFR 265.172**	☒	☐	☐	
27.	Are all containers holding hazardous waste closed except when necessary to add or remove waste? **40 CFR 265.173(a)**	☒	☐	☐	
28.	Does the CESQG or KSQG conduct inspections at least every 31 days looking for signs of deterioration and leaks in containers in storage? **KAR 28-31-262a(f)(2)(A) [CESQG] or KAR 28-31-262a(e)(2) [KSQG]**	☐	☐		
	Or				
	Does the SQG or LQG conduct weekly inspections of areas where containers are stored for signs of leakage and/or deterioration caused by corrosion or other factors? **40 CFR 265.174**	☒	☐		
29.	If the answer to question 28 was yes, are these inspections documented in a log that Includes complete date and time of inspection, name of inspector, notations of observations, and date and nature of remedial actions? **40 CFR 265.15(d)**	☐	☒		

		YES	NO	NA	V#
30.	Incompatible wastes:				
	a. If incompatible wastes or incompatible wastes and materials were placed in the same container, were the requirements of 40 CFR 265.17(b) complied with? **40 CFR 265.177(a)**	☒	☐		
	b. If hazardous waste was placed in an unwashed container that previously held incompatible waste or material, were the requirements of 40 CFR 265.17(b) complied with? **40 CFR 265.177(b)**	☒	☐		
	c. If storage containers of hazardous waste are incompatible with any waste or other materials stored nearby, are the containers separated from the other materials by means of a dike, berm, wall or other means? **40 CFR 265.177(c)**	☒	☐		
31.	Are storage containers holding ignitable or reactive waste(s) located at least 50 feet (15 meters) from the generator's property line? (LQG Only) **40 CFR 265.176**	☒	☐	☐	
32.	Are storage containers currently meeting all AA, BB, and CC requirements (LQG Only) **40 CFR 265.178**	☒	☐	☐	
33.	If the CESQG or KSQG is accumulating (including SAAs) 2,200 lbs (1,000 kgs) or more of hazardous waste, check yes and continue with SQG generator requirements.	☐		☒	
34.	If the CESQG or KSQG or SQG is accumulating (including SAAs) 2.2 lbs (1 kgs) or more of acutely hazardous waste, check yes and continue with LQG generator requirements.	☐		☒	

(If Accumulating CESQG, <2,200 lbs, stop here)

35.	Is the SQG storing 13,200 lbs (6,000 kgs) or less of hazardous waste for 180 days or less (270 days if transporting waste more than 200 highway miles)? **40 CFR 262.34(d)**	☐	☐	☒	
36.	Is the LQG storing hazardous waste for 90 days or less? **40 CFR 262.34(a)**	☐	☐	☒	

REPORTING AND RECORDKEEPING

37.	Has the generator (KSQG, SQG, and LQG) submitted an annual monitoring fee and report to KDHE indicating their current generator status on a form provided by the department? (LQGs are required to pay the annual fee every year, but this report is only required to be submitted in the odd years when the biennial report is not submitted.) **KAR 28-31-262a(b) (if neither report nor fee were submitted)** **KAR 28-31-10(a) (if only fee is missing)**	☒	☐	☐	
38.	If yes to number 37, was a copy of the report kept for a minimum of 3 years after the date of the signature on the report? **KAR 28-31-262a(b)(4)**	☒	☐	☐	
39.	Has the LQG submitted biennial report(s) to KDHE by March 1 of even years? **40 CFR 262.41(a)**	☒	☐	☐	
	a. Does the LQG retain a copy of the biennial report for three years? **40 CFR 262.40(b)**	☒	☐	☐	
40.	If the generator has exported/imported hazardous waste to/from a foreign source, did they comply with the requirements of **40 CFR 262.53(a)**, **40 CFR 262.54, and/or 40 CFR 262.60(a)**?	☐	☐	☒	

If hazardous waste was exported or imported to/from a foreign source, please describe under "additional information".

EMERGENCY PREPAREDNESS AND TRAINING REQUIREMENTS FOR KSQGs AND SQGs

	YES	NO	NA	V#
If the KSQG or SQG is not accumulating hazardous waste on-site, skip to question 47.				
41. Has the KSQG or SQG designated at least one employee as an emergency coordinator and are they on the premises or available to respond to an emergency by reaching the facility within a short period of time (30 minutes)? **40 CFR 262.34(d)(5)(i)**	☐	☐		
42. Is the emergency coordinator or his/her designee prepared to respond to any emergencies (fires, spills, or releases) that arise? **40 CFR 262.34(d)(5)(iv)**	☐	☐		
43. Is the following information posted next to at least one telephone which is accessible with little or no delay in an emergency? **40 CFR 262.34(d)(5)(ii)** (note: cite 262.34(a)(5)(ii) if no information is posted)	☐	☐		
a. Name and telephone number of emergency coordinator(s)? **40 CFR 262.34(d)(5)(ii)(A)**	☐	☐		
b. Location of fire extinguishers and spill-control material, and if available, fire alarms? **40 CFR 262.34(d)(5)(ii)(B)**	☐	☐		
c. Telephone number of fire department unless facility has a direct alarm (911 is acceptable)? **40 CFR 262.34(d)(5)(ii)(C)**	☐	☐		
44. If the facility has no telephone (land line), and relies soley on cell phones:				
a. Is the information required in 42a through 42c posted on wall so that it can be readily seen by employees? **KAR 28-31-262(c)(8)**	☐	☐		
b. Have the phone numbers required in 42a and 42c been programmed into the cell phones of management personnel? **KAR 28-31-262(c)(8)**	☐	☐		
45. Has the KSQG or SQG established a hazardous waste management training program meeting the requirements of 40 CFR 262.34(d)(5)(iii)? **KAR 28-31-262a(d)(1)** (SQG) **or KAR 28-31-262a(e)(4)** (KSQG)	☐	☐		
a. Are new personnel trained within six months after their employment or placement to a new position? **KAR 28-31-262a(d)(1)(A)** (SQG) **or KAR 28-31-262a(e)(4)(A)** (KSQG)	☐	☐		
b. After initial training, are employees trained on an annual basis? **KAR 28-31-262a(d)(1)(B)** (SQG) **or KAR 28-31-262a(e)(4)(B)** (KSQG)	☐	☐		
c. Was a record kept of the name of each employee trained, the date of the training, and the topics covered in the training **KAR 28-31-262a(d)(1)(C)** (SQG) **or KAR 28-31-262a(e)(4)(C)** (KSQG)	☐	☐		
d. Was the record of training kept for three years from the date of the training? **KAR 28-31-262a(d)(1)(D)** (SQG) **or KAR 28-31-262a(e)(4)(D)** (KSQG)	☐	☐		
e. If the KSQG or SQG relies on cell phones, have employees managing hazardous waste been trained on the locations of these postings? **KAR 28-31-262(c)(8)**	☐	☐		

PERSONNEL TRAINING FOR LQGs

	YES	NO	NA	V#
46. Has the LQG established a hazardous waste management training program? **40 CFR 265.16(a)(1)**	☐	☒		
a. Is the program directed by a person trained in hazardous waste management? **40 CFR 265.16(a)(2)**	☐	☐		
b. Are new personnel trained within six months after their employment or placement to a new position? **40 CFR 265.16(b)**	☐	☐		
c. Are new employees supervised until training is completed? **40 CFR 265.16(b)**	☐	☐		

	YES	NO	NA	V#
d. After initial training, are employees trained on an annual basis? **40 CFR 265.16(c)**	☐	☐		
e. Does the generator maintain the following documents and records: **40 CFR 265.15(d)**	☐	☐		
1. Job title for each position related to hazardous waste management and the name of the employee filling each job? **40 CFR 265.16(d)(1)**	☐	☐		
2. Written job description for each position? **40 CFR 265.16(d)(2)**	☐	☐		
3. Description of type and amount of both introductory and continuing training to be given to each person? **40 CFR 265.16(d)(3)**	☐	☐		
4. Records of training or job experience completed by facility personnel? **40 CFR 265.16(d)(4)**	☐	☐		
5. Are training records kept until closure of the facility (for current employees) and for three years from last date of employment (past employees)? **40 CFR 265.16(e)**	☐	☐		

MANIFEST REQUIREMENTS

47. If a contractual agreement is used in place of manifesting, (KSQG and SQG only)			
a. Does the contractual agreement include the type of waste and frequency of shipments? **40 CFR 262.20(e)(1)(i)**	☐	☐	☒
b. Is the vehicle used to transport the waste owned and operated by the reclaimer of the waste? **40 CFR 262.20(e)(1)(ii)**	☐	☐	☒
c. Is a copy of the agreement kept for a period of at least three years after termination of agreement? **40 CFR 262.20(e)(2)**	☐	☐	☒
48. If required, is a hazardous waste manifest used? **40 CFR 262.20(a)**	☒	☐	☐
49. If yes to number 48, does the manifest include the following (numbers correspond to the appropriate section of the manifest)? **40 CFR 262.20(a)**			
1. Generator EPA identification number (12-digit)	☒	☐	
2. Number of pages?	☒	☐	
3. Emergency response phone number? (may be entered after manifest item 9b only if different emergency response number(s) applies to different wastes on the manifest)	☒	☐	
4. Manifest Tracking Number (must be pre-printed)	☒	☐	
5. Generator's name, mailing address, phone number, and site address	☒	☐	
6. Transporter 1 company name and EPA ID number	☒	☐	
7. Transporter 2 company name and EPA ID number	☒	☐	☐
a. If more than 2 transporters were used, was a continuation sheet used?	☒	☐	☐
8. Designated facility name, site address, phone number, and EPA ID number?	☒	☐	
9. US DOT description (including proper shipping name, hazardous class or division, ID number, and packing group)	☒	☐	
9a. If hazardous and non-hazardous materials/wastes are listed on separate lines in Item 9b, is an "x" marked in item 9a next to the corresponding hazardous materials/wastes?	☒	☐	☐
10. Number and type of containers?	☒	☐	
11. Total quantity of waste?	☒	☐	
12. Unit of measure (weight or volume)?	☒	☐	
13. Waste codes (up to 6 can be entered)?	☒	☐	
14. Special handling instructions (if applicable)?	☒	☐	☐
15. Generator's/offeror's printed/typed name, signature, and date?	☒	☐	
16. Does the manifest apply to international shipment?	☒	☐	☐
If yes, did the primary exporter comply with all applicable requirements?	☒	☐	☐
17. Printed name, signature and dates received by transporter 1?	☒	☐	
18. Printed name, signature and date received by transporter 2?	☒	☐	

	YES	NO	NA	V#
50. Does the generator retain a copy of each initial manifest signed and dated by both generator and initial transporter until the copy signed and dated by the designated facility is received? **40 CFR 262.40(a)**	☒	☐	☐	
51. Does the generator retain a copy of each manifest for three years that was signed and dated by a representative of the designated facility? **40 CFR 262.40(a)**	☒	☐	☐	
52. If the LQG did not receive a copy of the manifest within 35 days that had been signed by the designated facility, did they contact the transporter and/or designated facility to determine the status of their hazardous waste? **40 CFR 262.42(a)(1)**	☐	☐	☒	
a. If the LQG was unable to locate their waste through contact with the transporter and/or designated facility, and still had not received a copy of the manifest within 45 days, did they file an exception report with KDHE? **40 CFR 262.42(a)(2)**	☐	☐	☒	
53. If the KSQG or SQG did not receive a copy of the manifest within 60 days that had been signed by the designated facility, did they submit to KDHE a legible copy of the manifest with an explanation of the situation? **40 CFR 262.42(b)**	☐	☐	☒	

LAND DISPOSAL RESTRICTION REQUIREMENTS

	YES	NO	NA	V#
54. If the generator's waste is **not** subject to the Land Disposal Restrictions regulations, please explain why: _____				
55. If the SQG or LQG sent waste meeting or not meeting the treatment standards to an off-site TSDF, did the generator provide a one-time written notice for each different waste stream? **40 CFR 268.7(a)(2)** (not meeting treatment standards) or	☐	☒	☐	
40 CFR 268.7(a)(3) (meeting treatment standards)	☐	☐	☒	
a. Did the notice include the following (mark each that it includes):				
☐ EPA hazardous waste numbers (waste codes);				
☐ manifest number for first shipment of waste;				
☐ Constituents of concern for F001-F005, F039, and underlying hazardous Constituents in characteristic wastes (unless the waste will be treated and monitored for all constituents. If all constituents will be treated and monitored, there is no need to put them all on the LDR notice)				
☐ applicable wastewater or non-wastewater category and subdivisions				
☐ waste analysis data (if available)				
b. If the generator chose not to make the determination of whether his/her waste must be treated, did he/she provide a one-time written notice that includes EPA hazardous waste numbers (waste codes); manifest number of the first shipment; and states "This hazardous waste may or may not be subject to the LDR treatment standards. The treatment facility must make the determination."? **40 CFR 268.7(a)(2)**	☐	☐	☐	
c. If the waste met the treatment standards, did the notice include the required certification statement? **40 CFR 268.7(a)(3)**	☐	☐	☐	
56. If the KSQG, SQG, or LQG treated waste in tanks or containers to meet applicable treatment standards:				
a. Did the generator have a written waste analysis plan on-site describing procedures used to comply with the treatment standards? **40 CFR 268.7(a)(5)**	☐	☐	☒	
b. If the generator sent the treated waste off-site, did the generator provide a notice and signed certification statement with the initial shipment? **40 CFR 268.7(a)(5)(iii)**	☐	☐	☒	

	YES	NO	NA	V#
57. Has the SQG or LQG retained copies of all notices, certifications, waste analysis data, and other documents for at least 3 years from the last date the corresponding waste was last managed on-site or shipped off-site? **40 CFR 268.7(a)(8)**	☐	☐	☒	
58. If the SQG or LQG is managing a labpack and using with the initial shipment of waste the alternate treatment standards found at 40 CFR 268.42(c), did they provide a notice that includes the required certification statement? **40 CFR 268.7(a)(9)**	☐	☐	☒	
59. If the SQG or LQG claims that their characteristic waste, including all applicable underlying hazardous constituents, is no longer hazardous, does the generator maintain a current, signed, one-time notice in their files? **40 CFR 268.9(d)**	☐	☐	☒	

Note: If a generator=s waste is subject to any Land Disposal Restriction regulations not covered above, then please discuss these situations under "additional information".

PREPAREDNESS AND PREVENTION REQUIREMENTS

	YES	NO	NA	V#
60. Has the generator maintained and operated the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents? **40 CFR 265.31**	☒	☐	☐	
61. **<u>If appropriate</u>**, based upon the nature and quantity of each waste generated and stored at the facility, is the facility equipped with:				
a. Internal communications or alarm system easily accessible in case of emergency? **40 CFR 265.32(a)**	☒	☐	☐	
b. Telephone or hand-held two-way radio capable of summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams? **40 CFR 265.32(b)**	☒	☐	☐	
c. Portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment? **40 CFR 265.32(c)**	☒	☐	☐	
d. Water of adequate volume and pressure to supply hose streams, or foam producing equipment, automatic sprinklers, or water spray systems? **40 CFR 265.32(d)**	☒	☐	☐	
62. Is the equipment (60a-60c above) tested and maintained to ensure its proper operation? **40 CFR 265.33**	☒	☐	☐	
63. Do personnel have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, when handling hazardous waste (unless such a device is not required under (40 CFR 265.32)? **40 CFR 265.34(a) and/or 40 CFR 265.34(b)**	☒	☐	☐	
64. Does a check of the facility show sufficient aisle space to allow unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment, unless aisle space is not needed for any of these purposes? **40 CFR 265.35**	☐	☒	☐	

65. **As appropriate**, for each type of waste handled, has the generator attempted to make the following arrangements:
   a. Familiarized the local emergency authorities with the facility layout, properties and hazards of each waste handled, locations of workers, entrances to facility roads, and possible evacuation routes? **40 CFR 265.37(a)(1)** ☒ ☐ ☐
   b. Designated one authority where more than one police or fire department might respond to an emergency? **40 CFR 265.37(a)(2)** ☐ ☐ ☒
   c. Made agreements with state emergency response teams, emergency response contractors, and equipment suppliers? **40 CFR 265.37(a)(3)** ☐ ☐ ☒
   d. Familiarized local hospitals with the properties of hazardous waste handled and types of injuries or illnesses which could result from fires, explosions, or releases at the facility? **40 CFR 265.37(a)(4)** ☐ ☐ ☒

66. In cases where state or local authorities decline to enter into such arrangements, is the refusal documented? **40 CFR 265.37(b)** ☐ ☐ ☒

(If KSQG or SQG, stop here)

CONTINGENCY PLAN FOR LQGs

	YES	NO	NA	V#
67. Does the generator have a contingency plan? **40 CFR 265.51(a)**	☒	☐		
If yes,				
a. Does the plan list the name, home address, and phone numbers (home and office) of each designated emergency coordinator in the order in which they should be contacted? **40 CFR 265.52(d)**	☐	☒		
b. Is an emergency coordinator available at all times? **40 CFR 265.55**	☒	☐		
c. Does the plan describe emergency actions facility personnel must take to respond to fires, explosions, or releases of hazardous waste or hazardous constituents? **40 CFR 265.52(a)**	☒	☐		
d. Does the plan describe arrangements made with police, fire departments, hospitals, contractors, or any emergency response agency? **40 CFR 265.52(c)**	☒	☐		
e. Does the plan include an up to date list of all emergency equipment at the facility, its location, a physical description of each item on the list, and a brief outline of the capabilities of each item? **40 CFR 265.52(e)**	☒	☐		
f. Does the plan include an evacuation plan for facility personnel that describes signals to be used and evacuation routes? **40 CFR 265.52(f)**	☒	☐		
g. Has the plan been amended, if the following occurred: **40 CFR 265.54**				
1. Applicable regulations were revised? **40 CFR 265.54(a)**	☒	☐		
2. The plan failed in an emergency? **40 CFR 265.54(b)**	☒	☐		
3. There is an applicable change to the facility? **40 CFR 265.54(c)**	☒	☐		
4. The list of emergency coordinators changes? **40 CFR 265.54(d)**	☒	☐		
5. The list of emergency equipment changes? **40 CFR 265.54(e)**	☒	☐		
h. Is a copy of the plan and any revisions maintained at the facility? **40 CFR 265.53(a)**	☒	☐		
i. Have copies of the plan and any revisions been provided to the police and fire departments, hospitals, and any emergency response agency that may respond to an emergency? **40 CFR 265.53(b)**	☐	☒		
j. If implementation of the plan has been required at the facility, did the generator submit a written report on the incident to the KDHE within 15 days after the incident? **40 CFR 265.56(i)**	☐	☐	☒	

V# = Violation Number
Checklist Revised May 2, 2011

SUBPART C
USED OIL GENERATOR
COMPLIANCE INSPECTION REPORT

	Off-Spec Used Oil	On-Spec Used Oil	Oil Filters
Types of Oils: (i.e. motor oil, cooling oil, cutting oil, compressor oil)	Motor Oil		
Amount generated per month:	15 gallons per year		
Amount received from off-site sources:	NA		
Amount presently in storage:	NA		
Accumulation time:	NA		
Present recycling methods:	Heritage-Crystal Clean (Kansas City, Kansas)		
Name of UO Transporter	Heritage-Crystal Clean (Kansas City, Kansas)		

	YES	NO	NA	V#
1. If the generator is a KSQG, SQG, or LQG, do they mix hazardous waste with their used oil?	☐	☐	☒	
If yes,				
a. If the used oil is mixed with a listed hazardous waste, is the mixture managed as a hazardous waste? **40 CFR 279.10(b)(1)**	☐	☐	☒	
b. If the used oil is mixed with a characteristic hazardous waste (other than ignitability), and the resulting mixture exhibits any hazardous waste characteristics (other than ignitability), is the mixture managed as a hazardous waste? **40 CFR 279.10(b)(2)**	☐	☐	☒	
If yes, list the characteristics: _____				
c. If the used oil is mixed with an ignitable (D001 only) hazardous waste, and the resulting mixture is ignitable, is the mixture managed as hazardous waste (D001)? **40 CFR 279.10(b)(2)**	☐	☐	☒	
2. If the generator stores used oil on-site:				
a. Is the storage unit(s) in good condition? **40 CFR 279.22(b)**	☐	☒	☐	
b. Is the storage unit(s) free from leaks? **40 CFR 279.22(b)**	☒	☐	☐	
c. Is the storage unit(s) and/or fill pipe(s) clearly labeled with the words "USED OIL"? **40 CFR 279.22(c)** (If storage unit(s) is labeled "Waste Oil", simply make a comment that they should be relabeled "Used Oil.")	☐	☒	☐	
3. If there has been a release of used oil:				
a. Was the leak stopped? **40 CFR 279.22(d)(1)**	☒	☐	☐	
b. Was the release contained? **40 CFR 279.22(d)(2)**	☒	☐	☐	
c. Was the release cleaned-up and managed properly? **40 CFR 279.22(d)(3)**	☐	☒	☐	
d. If necessary, was the storage unit repaired or replaced? **40 CFR 279.22(d)(4)**	☐	☐	☒	
4. If the generator burns used oil on-site in a space heater,				
a. Does generator burn only used oil that the generator/operator generates or used oil received from household do-it-yourself used oil generators, or used oil from any source that has been determined to be on-spec? **40 CFR 279.23(a)**	☐	☐	☒	
b. Is the space heater designed to have a maximum capacity of not more than 0.5 million Btu per hour? **40 CFR 279.23(b)**	☐	☐	☒	
c. Are the combustion gases from the space heater vented to the ambient air? **40 CFR 279.23(c)**	☐	☐	☒	

SUBPART C
USED OIL GENERATOR
COMPLIANCE INSPECTION REPORT (Continued)

	YES	NO	NA	V#
5. If the generator self-transports used oil to an approved collection site or to an aggregation point owned by the generator,				
a. Does the generator transport used oil in a vehicle owned by the generator or an employee of the generator? **40 CFR 279.24(a)(1)** or **40 CFR 279.24(b)(1)**	☐	☐	☒	
b. Does the generator transport no more than 55 gallons of used oil at any time? **40 CFR 279.24(a)(2)** or **40 CFR 279.24(b)(2)**	☐	☐	☒	

NOTE: IF NO TO QUESTION 5-a OR 5-b, COMPLETE USED OIL TRANSPORTER CHECKLIST.

6. If the generator has their used oil reclaimed under a tolling (contractual) agreement,				
a. Does the tolling (contractual) agreement indicate the type of used oil and the frequency of shipments? **40 CFR 279.24(c)(1)**	☐	☐	☒	
b. Is the vehicle used to transport the used oil to the processing/re-refining facility and to deliver recycled used oil back to the generator owned and operated by the used oil processor/re-refiner? **40 CFR 279.24(c)(2)**	☐	☐	☒	
c. Is reclaimed oil returned to the generator? **40 CFR 279.24(c)(3)**	☐	☐	☒	
7. Does the generator use a used oil transporter who has an EPA ID number? **40 CFR 279.24**	☒	☐	☐	
8. Has the transporter registered with KDHE? **K.A.R. 28-31-6(b) (cite transporter only)**	☒	☐	☐	

V# = Violation Number
Used Oil Generator Checklist Revised 5-2-11
Password - oil

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CONFIDENTIALITY NOTICE

Facility Name GBW Railroad Services	
Facility Address 15624 258th Road Cummings, KS 66016	
Inspector (print) Michael J Martin	
U.S. EPA, Region 7, 11201 Renner Blvd., Lenexa, KS 66219	Date 08/11/2016

The United States Environmental Protection Agency (EPA) is obligated, under the Freedom of Information Act, to release information collected during inspections to persons who submit requests for that information. The Freedom of Information Act does, however, have provisions that allow EPA to withhold certain confidential business information from public disclosure. To claim protection for information gathered during this inspection you must request that the information be held CONFIDENTIAL and substantiate your claim in writing by demonstrating that the information meets the requirements in 40 CFR2, Subpart B. The following criteria in Subpart B must be met:

1. Your company has taken measures to protect the confidentiality of the information, and it intends to continue to take such measures.

2. No statute specifically requires disclosure of the information.

3. Disclosure of the information would cause substantial harm to your company's competitive position.

Information that you claim confidential will be held as such pending a determination of applicability by EPA.

I have received this Notice and DO NOT want to make a claim of confidentiality at this time.	
Facility Representative Provided Notice (print) Andrea R. Jones	Signature/Date 8/11/16

I have received this Notice and DO want to make a claim of confidentiality.	
Facility Representative Provided Notice (print)	Signature/Date

Information for which confidential treatment is requested:

(Rev: 7/1/14) White Original / EPA • Yellow / Facility

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RECEIPT FOR DOCUMENTS AND SAMPLES

Facility Name
GHW Rail Car Services
Facility Address
15624 258th Road Cummings, KS 66016

Documents Collected? YES ✓ (list below) NO ____

Samples Collected? YES ____ (list below) NO ✓ Split Samples: YES ____ NO ____

Documents/ Samples were: 1) Received no charge ✓ 2) Borrowed ____ 3) Purchased____

Amount Paid: $_____ Method: Cash ____ Voucher ____ To Be Billed ____

The documents and samples described below were collected in connection with the administration and enforcement of the applicable statute under which the information is obtained.

Receipt for the document(s) and/or sample(s) described below is hereby acknowledged:

1) Facility Layout (1 page)
2) 2016 Manifest Spreadsheet (3 pages)
3) 2015 Manifest Spreadsheet (4 pages)
4) 2015 Hazardous Waste Report (63 pages)
5) Hempadur 15500 SDS (10 pages)
6) Hempel's Curing Agent 97350 SDS (10 pages)
7) Carboguard 992 Part A SDS (10 pages)
8) Carboguard 992 Part B SDS (11 pages)
9) Carbozinc HS Activator SDS (9 pages)
10) Carbozinc 11 HS Base SDS (10 pages)
11) 2016 Non-Hazardous Waste Spreadsheet (3 pages)
12) Hempel's Light Clean 99350 SDS (9 pages)
13) Heavy Crude Oil MSDS (9 pages)
14) Peace River Seal Heavy Crude MSDS (12 pages)
15) Contingency Plan (16 pages)

Facility Representative (print)	Signature/Date
Andrea R. Jones	8/11/16
Inspector (print)	Signature/Date
Michael J. Martin	08/11/2016
U.S. EPA, Region 7, 11201 Renner Blvd., Lenexa, KS 66219	

(Rev: 7/14/14) White Original / EPA • Yellow / Facility

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RECEIPT FOR DOCUMENTS AND SAMPLES

Facility Name
Facility Address

Documents Collected? YES ✓ (list below) NO ____

Samples Collected? YES ____ (list below) NO ✓ Split Samples: YES ____ NO ____

Documents/ Samples were: 1) Received no charge ✓ 2) Borrowed ____ 3) Purchased____

Amount Paid: $_____ Method: Cash ____ Voucher ____ To Be Billed ____

The documents and samples described below were collected in connection with the administration and enforcement of the applicable statute under which the information is obtained.

Receipt for the document(s) and/or sample(s) described below is hereby acknowledged:

16) 2016 DOT Training Log (2 pages)
17) Andrea Jones 2015 DOT Training Certificate (1 page)
18) Nano Dissolve Gel SDS (5 pages)
19) MEK MSDS (6 pages)
20) Denatured Ethanol SDS (9 pages)
21) Anhydrous Ethyl Alcohol SDS (14 pages)
22) SKC-S MSDS (3 pages)
23) SKL-SR2 SDS (10 pages)
24) SKD-S2 SDS (10 pages)
25) LPG Waste Profile / Cleaning Profile (22 pages)
26) 12/22/14 Manifest (4 pages)
27) 11/11/14 Manifest (5 pages)
28) 10/13/14 Manifest (5 pages)
29) 10/26/14 Manifest (3 pages)
30) 09/25/14 Manifest (7 pages)
31) 06/19/15 Manifest (7 pages)
32) 11/2014 Wastewater Log (3 pages)
33) 06/05/16 Oily Water Pickup (1 page)
34) 07/05/16 Wash Water Pickup (2 pages)
35) 08/10/16 Manifest (3 pages)
36) 11/10/15 Toluene + Wastewater Shipment (4 pages)

Facility Representative (print)	Signature/Date
Andrea R. Jones	8/11/16
Inspector (print)	Signature/Date
Michael J. Martin	M Martin 08/11/2016
U.S. EPA, Region 7, 11201 Renner Blvd., Lenexa, KS 66219	

(Rev: 7/14/14) White Original / EPA • Yellow / Facility

Notice of Violation Pursuant to Requirements
of the Resource Conservation and Recovery Act (RCRA)

TO: Facility Name: GBW Railcar Services
Address: 15624 258th Road
Cummings, KS 66016
EPA ID Number: KSD 043936277 Date: 08/11/2016

This notice is provided to call your attention to the following areas of noncompliance with state and federal regulations. This notice does not constitute a compliance order (Administrative Civil Complaint) pursuant to Section 3008 of RCRA and may not be a complete listing of all violations resulting from the the inspection.

Citation	Description of Violation
(1) 40 CFR 262.11	Hazardous waste determination not conducted.
	(A) 1,500-gallons of bulk tank water per month.
	(B) 55-gallons of railcar PPE per month.
	(C) One full 10-gallon drum of unknown liquid located at the Railcar Cleaning Equipment Area
	(D) Crude oil rinse water
	(E) One 20-yard roll-off of spent blast media per month
	(F) Due Pen rags generated in Building 1+3
	(G) 55-gallon drum of waste paint related material (masking paper, PPE etc.) generated per week
MM	~~(H) Waste Acetone (Shipped off site as Cost Waste)~~

You are requested to submit a written response within **14 calendar days** of receipt of this notice. Your response should include a description of all corrective actions taken and/or a schedule for completing the necessary corrective actions. The response should be submitted to:

U. S. Environmental Protection Agency, Region VII
Environmental Services + Technology Division
300 Minnesota Avenue
Kansas City, KS 66101
ATTN. Michael J. Martin

If you have any questions about this Notice or wish to discuss your response, you may call me at (913) 551-7149, or Ed Buckner (Compliance Officer) at (913) 551-7621.

This Notice prepared by Michael J. Martin Date: 08/11/2016

The undersigned person acknowledges that he/she has received a copy of this Notice and has read same.

Printed Name: Andrea R. Jones Date: 8/11/16
Signature:
Title: EHS Manager

Notice of Violation Pursuant to Requirements
of the Resource Conservation and Recovery Act (RCRA)

TO: Facility Name: _____
Address: _____
_____

EPA ID Number: _____ Date: _____

This notice is provided to call your attention to the following areas of noncompliance with state and federal regulations. This notice does not constitute a compliance order (Administrative Civil Complaint) pursuant to Section 3008 of RCRA and may not be a complete listing of all violations resulting from the the inspection.

Citation	Description of Violation
(H)	(~~I~~) One full 5-gallon drum of Kerosene stored at the Equipment Unit located near the Paint Shop + Blast Shop
(I)	(~~J~~) Parts Washer solvent stored in the parts washer unit at Building 1
(J)	(~~K~~) One 5-gallon pail of Waste MEK kegs per month generated at the Paint Shop
(K)	(~~L~~) Four fluorescent lamps (one box) at Building 3
(L)	(~~M~~) One Full 12-gallon drum of Heavy Duty Acid Cleaner (Bldg. 3)
(M)	(~~N~~) One ~~3/4~~ Full 5-gallon pail (non-labeled) at Building 3
(N)	(~~O~~) One 5-gallon pail (1 cup full) of Dexron III + Motor ATF at Building 3
(O)	(~~P~~) 11/10/15 - Non-hazardous shipment of Acetone/Toluene Waste (4,675 lbs)

You are requested to submit a written response within **14 calendar days** of receipt of this notice. Your response should include a description of all corrective actions taken and/or a schedule for completing the necessary corrective actions. The response should be submitted to:

U. S. Environmental Protection Agency, Region VII
_____
_____
_____
ATTN. _____

If you have any questions about this Notice or wish to discuss your response, you may call me at _____, or _____ (Compliance Officer) at _____.

This Notice prepared by Michael J. Martin Date: 08/11/2016

The undersigned person acknowledges that he/she has received a copy of this Notice and has read same.

Printed Name: Andrea R. Jones Date: 8/11/16
Signature: _____
Title: EHS Manager

Notice of Violation Pursuant to Requirements
of the Resource Conservation and Recovery Act (RCRA)

TO: Facility Name: _____
Address: _____

EPA ID Number: _____ Date: _____

This notice is provided to call your attention to the following areas of noncompliance with state and federal regulations. This notice does not constitute a compliance order (Administrative Civil Complaint) pursuant to Section 3008 of RCRA and may not be a complete listing of all violations resulting from the the inspection.

Citation	Description of Violation
(2) KAR 28:31-4	Notification (change of Site Contact) not made within 60 days
(3) 40CFR 262.31	Hazardous Waste Storage drums not labeled per DOT - 15 drums of Crude Oil Waste located at the Wash Track
(4) 40CFR 262.32 (a)+(b)	Hazardous Waste Storage drums not marked per DOT (A) Same drums in citation #3 (B) One 55-gallon drum of waste paint (Paint Shop)

You are requested to submit a written response within **14 calendar days** of receipt of this notice. Your response should include a description of all corrective actions taken and/or a schedule for completing the necessary corrective actions. The response should be submitted to:

U. S. Environmental Protection Agency, Region VII
_____
_____
_____
ATTN. _____

If you have any questions about this Notice or wish to discuss your response, you may call me at _____, or _____(Compliance Officer) at _____.

This Notice prepared by Michael J. Martin Date: 08/11/2016

The undersigned person acknowledges that he/she has received a copy of this Notice and has read same.

Printed Name: Andrea R. Jones Date: 8/11/16
Signature: _____
Title: EHS Manager

Notice of Violation Pursuant to Requirements
of the Resource Conservation and Recovery Act (RCRA)

TO: Facility Name: _____
Address: _____

EPA ID Number: _____ Date: _____

This notice is provided to call your attention to the following areas of noncompliance with state and federal regulations. This notice does not constitute a compliance order (Administrative Civil Complaint) pursuant to Section 3008 of RCRA and may not be a complete listing of all violations resulting from the the inspection.

Citation	Description of Violation
(5) 40CFR 262.34(a)(2)	Accumulation start date, not marked on hazardous waste storage drums. – Three drums (55-gallon each) of crude oil waste (Lynch Truck)
(6) 40CFR 262.34(a)(3)	Storage drums not labeled with the words "Hazardous Waste" (A) Some drums in citation #3
* (7) KAR 28-31-262(c)(7) ok (corrected at the time of inspection)	Satellite drum not labeled with the words "Hazardous Waste" – One ¼ full drum of waste paint (Paint Shop)

You are requested to submit a written response within **14 calendar days** of receipt of this notice. Your response should include a description of all corrective actions taken and/or a schedule for completing the necessary corrective actions. The response should be submitted to:

U. S. Environmental Protection Agency, Region VII
_____
_____
_____
ATTN. _____

If you have any questions about this Notice or wish to discuss your response, you may call me at _____, or _____ (Compliance Officer) at _____.

This Notice prepared by Michael J. Martin Date: 08/11/2016

The undersigned person acknowledges that he/she has received a copy of this Notice and has read same.

Printed Name: Andrea R Jones Date: 8/11/16
Signature: _____
Title: EHS Manager

Notice of Violation Pursuant to Requirements
of the Resource Conservation and Recovery Act (RCRA)

TO: Facility Name: _____
Address: _____

EPA ID Number: _____ Date: _____

This notice is provided to call your attention to the following areas of noncompliance with state and federal regulations. This notice does not constitute a compliance order (Administrative Civil Complaint) pursuant to Section 3008 of RCRA and may not be a complete listing of all violations resulting from the the inspection.

Citation	Description of Violation
(8) 40 CFR 265.171	Drums storing hazardous waste not in good condition (A) One 55-gallon storage drum of crude oil waste (Wash Track) (dented lid) (B) One 55-gallon Satellite drum of aerosol can waste (Paint Shop) (bulging lid)
(9) 40 CFR 265.15(d)	Weekly hazardous waste inspections not documented.
(10) 40 CFR 265.35	Adequate aisle space not provided for the unobstructed movement of personnel, fire protection equipment, + spill control equipment (Wash Track - 14 storage drums of crude oil waste).

You are requested to submit a written response within **14 calendar days** of receipt of this notice. Your response should include a description of all corrective actions taken and/or a schedule for completing the necessary corrective actions. The response should be submitted to:

U. S. Environmental Protection Agency, Region VII
_____
_____
_____
ATTN. _____

If you have any questions about this Notice or wish to discuss your response, you may call me at _____, or _____ (Compliance Officer) at _____.

This Notice prepared by Michael J. Martin Date: 08/11/2016

The undersigned person acknowledges that he/she has received a copy of this Notice and has read same.

Printed Name: Andrea R. Jones Date: 8/11/16
Signature: _____
Title: EHS Manager

Notice of Violation Pursuant to Requirements
of the Resource Conservation and Recovery Act (RCRA)

TO: Facility Name: _____
Address: _____

EPA ID Number: _____ Date: _____

This notice is provided to call your attention to the following areas of noncompliance with state and federal regulations. This notice does not constitute a compliance order (Administrative Civil Complaint) pursuant to Section 3008 of RCRA and may not be a complete listing of all violations resulting from the the inspection.

Citation	Description of Violation
(11) 40CFR 265.16(a)(1)	Hazardous Waste Management training program not established.
(12) 40CFR 265.52(d)	Contingency Plan does not list the addresses of the Emergency Coordinators.
(13) 40CFR 265.53(b)	Revision (02/24/16) of the contingency plan not provided to local police departments, hospitals, and State/local emergency response teams.

You are requested to submit a written response within **14 calendar days** of receipt of this notice. Your response should include a description of all corrective actions taken and/or a schedule for completing the necessary corrective actions. The response should be submitted to:

U. S. Environmental Protection Agency, Region VII
_____
_____
_____
ATTN: _____

If you have any questions about this Notice or wish to discuss your response, you may call me at _____, or _____ (Compliance Officer) at _____.

This Notice prepared by Michael J. Martin Date: 08/11/2016

The undersigned person acknowledges that he/she has received a copy of this Notice and has read same.

Printed Name: Andrea P. Jones Date: 8/11/16
Signature: _____
Title: EHS Manager

Notice of Violation Pursuant to Requirements
of the Resource Conservation and Recovery Act (RCRA)

TO: Facility Name: _____
Address: _____

EPA ID Number: _____ Date: _____

This notice is provided to call your attention to the following areas of noncompliance with state and federal regulations. This notice does not constitute a compliance order (Administrative Civil Complaint) pursuant to Section 3008 of RCRA and may not be a complete listing of all violations resulting from the the inspection.

Citation	Description of Violation
(14) 40CFR 279.22(b)	Used oil Storage units not in good condition (A) One 250-gallon used oil AST (dented + rusted) (B) One 55-gallon drum of used oil Filters (lid dented + rusted).
(15) 40CFR 279.22(c)	Containers of used oil not labeled with the words "Used Oil". (A) one full 5-gallon pail of used oil (Bldg. 3) (C) one ¼ full 5-gallon pail of used oil (Bldg. 3)
(16) 40CFR 279.22(d)(3)	Used oil release not cleaned-up + managed properly 10by10 foot area (Sheer Cutting Machine) at Building 3.

You are requested to submit a written response within **14 calendar days** of receipt of this notice. Your response should include a description of all corrective actions taken and/or a schedule for completing the necessary corrective actions. The response should be submitted to:

U. S. Environmental Protection Agency, Region VII
_____
_____
_____
ATTN: _____

If you have any questions about this Notice or wish to discuss your response, you may call me at _____, or _____ (Compliance Officer) at _____.

This Notice prepared by Michael J. Martin Date: 08/11/2016

The undersigned person acknowledges that he/she has received a copy of this Notice and has read same.

Printed Name: Andrea P. Jones Date: 8/11/16
Signature: [signature]
Title: EHS Manager

Notice of Violation Pursuant to Requirements
of the Resource Conservation and Recovery Act (RCRA)

TO: Facility Name: _____
Address: _____
_____

EPA ID Number: _____ Date: _____

This notice is provided to call your attention to the following areas of noncompliance with state and federal regulations. This notice does not constitute a compliance order (Administrative Civil Complaint) pursuant to Section 3008 of RCRA and may not be a complete listing of all violations resulting from the the inspection.

Citation	Description of Violation
(17) 40 CFR 268.7(a)(2)	LDR notice not on-file (shipments of Crude waste and waste paint to Heritage Crystal-Clean).

You are requested to submit a written response within **14 calendar days** of receipt of this notice. Your response should include a description of all corrective actions taken and/or a schedule for completing the necessary corrective actions. The response should be submitted to:

U. S. Environmental Protection Agency, Region VII
_____
_____
_____
ATTN. _____

If you have any questions about this Notice or wish to discuss your response, you may call me at _____, or _____ (Compliance Officer) at _____.

This Notice prepared by Michael J. Alarie Date: 08/11/2016

The undersigned person acknowledges that he/she has received a copy of this Notice and has read same.

Printed Name: Andrea L Jones Date: 8/11/16
Signature: _____
Title: EHS Manager

Hazardous Waste Site Info Verification Report for Inspector

May 24, 2016

PROCEDURES for Inspectors/Investigators/etc. performing Site Visits:
Present the Facility representative with a copy of their Site Info Verification Report (Iowa facilities only).

If during the course of the site visit, the inspector/investigator becomes aware of any changes which should be made to the information printed on this form, please make the corrections and return the form to Elizabeth Koesterer, AWMD/WEMM.

Our instructions to them are printed on their Site Info Verification Report, and should be self explanatory. If the Iowa facility wants to revise their Site Info Verification Report, they can do so and mail it back to EPA R7, or have the inspector deliver it.

If a Kansas, Missouri or Nebraska facility wants to change their information, they must fill out a RCRA Subtitle C Site Identification Form (or equivalent State form) and mail it to the appropriate State.

EPA RCRA ID Number: **KSD043936277**

Name of Company/Site: **GBW RAILCAR SERVICES**

Location of Site: 15624 258TH ROAD
CUMMINGS, KS 66016
ATCHISON County

Land Type: Private

NAICS: 488210 - SUPPORT ACTIVITIES FOR RAIL TRANSPORTATION

Mailing Address: PO ,BOX 436
ATCHISON, KS 66002

Site Contact: ~~DON LASSEN~~ Andrea Jones
Job Title: EHS MANAGER
Address: ~~PO BOX 436~~ 15624 258th Rd
~~ATCHISON, KS 66002~~ Cummings, KS 66016
Email: ~~DON.LASSEN@GBWSERVICES.COM~~ andrea.jones@gbwservices.com
Phone Number: 8667854082 ~~194346~~

Current Owner of Site: GREENBRIER RAIL SVCS
Owner Type: Private

Current Operator of Site: GBW RAILCAR SERVICES-ATCHINSON
Operator Type: Private

TYPE(S) OF REGULATED ACTIVITY: Federal Large Quantity Generator
State LQG (Large Quantity Generator)

Date of Site Visit: 08/09-11/2016
Name of Inspector (Please print): Michael J. Martin
(Check one): [✓] EPA R7 ENST [ ] EPA R7 Contractor [ ] NOWCC/SEE Investigator
Signature of Inspector/Investigator: M Martin

Hazardous Waste Site Info Verification Report for Inspector

May 24, 2016

PROCEDURES for Inspectors/Investigators/etc. performing Site Visits:
Present the Facility representative with a copy of their Site Info Verification Report (Iowa facilities only).

If during the course of the site visit, the inspector/investigator becomes aware of any changes which should be made to the information printed on this form, please make the corrections and return the form to Elizabeth Koesterer, AWMD/WEMM.

Our instructions to them are printed on their Site Info Verification Report, and should be self explanatory. If the Iowa facility wants to revise their Site Info Verification Report, they can do so and mail it back to EPA R7, or have the inspector deliver it.

If a Kansas, Missouri or Nebraska facility wants to change their information, they must fill out a RCRA Subtitle C Site Identification Form (or equivalent State form) and mail it to the appropriate State.

Hazardous Wastes Handled: D001 D006 D007 D008 D018 D035 F003 F005

1st N 06/21/99 N 02/17/15 1

Certified by Notification on 02/17/15 by
RYAN SCHAFFER 02/12/15
PLANT MANAGER

Date of Site Visit: 08/09-11/2016
Name of Inspector (Please print): Michael S. Martin
(Check one): [✓] EPA R7 ENST [ ] EPA R7 Contractor [ ] NOWCC/SEE Investigator
Signature of Inspector/Investigator: Michael Martin

Bureau of Waste Management
Curtis State Office Building
1000 SW Jackson St., Suite 320
Topeka, KS 66612-1366

Kansas

Phone: 785-296-1600
Fax: 785-296-1592 or 785-296-8909
bwmweb@kdheks.gov
www.kdheks.gov/waste

Susan Mosier, MD, Secretary | Department of Health & Environment | Sam Brownback, Governor

January 7, 2016

~~Don Lassen~~ Andrea Jones
GBW Railcar Services
PO Box 436
Atchison, KS 66002

Re: 2015 Biennial Hazardous Waste Report
EPA Identification (ID) Number: KSD043936277

Dear Environmental Coordinator:

Our records show that the facility referenced above was a Large Quantity Generator (LQG) and/or an operating Treatment, Storage and Disposal Facility (TSDF) for at least one month during 2015. **Before March 1, 2016**, all LQGs and TSDFs must submit the 2015 Biennial Hazardous Waste Report and all LQGs must pay the annual monitoring fee. If the report and/or fee payment are not received, this facility will be in violation of KAR 28-31-10 and/or KAR 28-31-262, -264 or -265 and may receive a penalty.

If this facility was not an LQG or TSDF during 2015, please update the enclosed Site Identification Verification Form with the current generator/site status and indicate the date the status changed (Section IX.A). Also note in the Comments section (Section XI) if and why this facility is not required to file the 2015 Biennial Hazardous Waste Report.

Instructions and forms for completing the 2015 Biennial Hazardous Waste Report are available on the Bureau of Waste Management (BWM) website at: **www.kdheks.gov/waste**. A complete report submission consists of the following:

- ☑ The updated Site Identification Verification Form (enclosed)
- ☐ The MF Form - LQG Monitoring Fee Invoice (enclosed, unless this facility is a TSDF but not an LQG)
- ☐ The appropriate LQG monitoring fee payment, payable to the **Hazardous Waste Management Fund-KDHE**
- ☒ Legible copies of all the facility's hazardous waste shipping manifests for 2015
- ☒ A spreadsheet (e.g., in Excel) that summarizes the manifests, with all waste reported in pounds
- ☐ A CD with data files (see the following paragraph) OR
  - ☒ Printed GM Form(s) - Waste Generation and Management (available online)
  - ☐ If applicable, printed WR Form(s) - Waste Received from Off-Site (available online)

To ensure easier and more accurate reporting, BWM encourages the use of a free electronic reporting software tool (BRState) to create the GM and/or WR Forms as electronic data files. This free software, provided by the State of Florida, will be available at:

www.dep.state.fl.us/waste/categories/hazardous/pages/BRS_data.htm.

After entering the GM and/or WR Form data electronically, copy the data files to a compact disc (CD) using the BRState software and include the CD along with the rest of the submission. [Do NOT submit the GM and/or WR forms in a "PDF" file format on the CD.]

Be sure to:

☐ Include the facility EPA ID number on each item and on each page that is submitted
☐ Make a copy of the completed 2015 Biennial Hazardous Waste Report and keep it for at least three years
☐ Mail the report and payment to the following address:

Stacey Smith
Bureau of Waste Management
1000 SW Jackson St Ste 320
Topeka KS 66612-1366

If you have any questions or need assistance, please contact me by phone at 785-296-1606 or by email at notifications@kdheks.gov. Your cooperation with the Kansas Hazardous Waste Program is appreciated.

Sincerely,

Stephanie Fackrell

Stephanie Fackrell
Bureau of Waste Management
Regulations and Data Unit

Enclosures

MF Form

Kansas
Department of Health and Environment

2015 Large Quantity Generator (LQG) Monitoring Fee Invoice

EPA ID: KSD043936277
GBW Railcar Services
15624 258th Road
Cummings, KS 66016

1. **Record the tons of hazardous waste generated in 2015 in the table below.**
   - All quantities must be reported in tons (1 ton = 2,000 pounds)
   - If the density of a liquid is unknown, use a conversion factor of 1 gallon = 8 pounds
   - EXEMPTION: Hazardous wastes which are reclaimed onsite to recover substantial amounts of either energy or materials are exempt from the fee, however hazardous waste residues produced during reclamation are not exempt.

Line	Category of Waste	Tons Generated in 2015
1	Total quantity of hazardous waste:	153
2	*Hazardous waste that is exempt from the fee:	Ø
3	Hazardous waste that is subject to the fee (line 1 minus line 2):	153

**You must attach an explanation of why the waste meets the exemption.*

2. **Use the chart below to determine the LQG monitoring fee due for this facility.**

QUANTITY GENERATED IN 2015 (FROM LINE 3 ABOVE)	Fee
Less than or equal to 5 tons	$300
Greater than 5 tons, but less than or equal to 50 tons	$900
Greater than 50 tons, but less than or equal to 500 tons	$2,800
Greater than 500 tons	$8,000

2015 LQG Monitoring Fee $ 2,800.00

(Note: If this facility paid a KSQG/SQG fee for 2015, you may subtract that amount from the 2015 LQG fee.)

3. **Submit fee payment and this Invoice along with your Hazardous Waste Report before March 1, 2016:**
   - ☐ Make the check payable to the "Hazardous Waste Management Fund-KDHE"
   - ☐ Include the facility EPA ID number on the check
   - ☐ If the check includes payment for more than one facility, provide detailed information indicating the EPA ID number and fee amount for each facility.
   - ☒ Enclose legible copies of all manifests for hazardous waste shipments in 2015
   - ☒ Provide a spreadsheet that summarizes the manifests, with all waste reported in tons
   - ☐ Mail to:

     Stacey Smith
     Bureau of Waste Management
     1000 SW Jackson St Ste 320
     Topeka KS 66612-1366

SEND COMPLETED FORM TO: see instructions	Kansas Department of Health and Environment Bureau of Waste Management **SITE IDENTIFICATION VERIFICATION FORM**
I. The form is being submitted CHECK CORRECT BOX(ES)	☐ To provide Initial Notification of Regulated Waste Activity (to obtain an EPA ID Number for hazardous waste, or used oil activities) ☐ To provide Subsequent Notification of Regulated Waste Activity (to update site identification information) ☐ As a component of a First RCRA Hazardous Waste Part A Permit Application ☐ As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment #) ☒ As a component of the Hazardous Waste Report ☐ Site was a TSD facility and/or generator of >1,000 kg of hazardous waste, >1 kg of acute hazardous waste, or > 100 kg of acute hazardous waste spill cleanup in one or more months of the report year
II. Site's ID Number	A. Site's Identification (ID) Number: KSD043936277
III. Name of Site	A. Legal company name: GBW Railcar Services
	B. Site specific name (d/b/a): GBW Railcar Services
III. Added or Corrected Legal Company Name	A. Legal company name:
III. Added or Corrected Site Specific Name	B. Site specific name (d/b/a):
IV. NAICS for this Site	A. 488210 B. C. D.
IV. Additional or Corrected NAICS for this Site	A. B. C. D.
V. Site Location Address and Other Site Information If there is a change in the site location address you must explain why in Section XI, Comments.	Street Address: 15624 258th Road
	Address line 2: City, Town, or Village: Cummings
	State, Province, or Subdivision (2 letters): KS Country: UNITED STATES
	County Name: Atchison ZIP/Postal Code: 66016-
V. Additional Site Location Address and Additional or Corrected Other Site Information TYPE OR PRINT CLEARLY	Street Address:
	Address line 2: City, Town, or Village:
	State, Province, or Subdivision (2 letters): Country:
	County Name: ZIP/Postal Code:

GBW
RAILCAR SERVICES, LLC

GBW Rail Services - Atchison
PO Box 436
Atchison, KS 66002

Hazardous Waste Manifests
KSD043936277

SHIPPING MANIFEST No.	MATERIAL TYPE	WASTE CODES	NUMBER of Containers	POUNDS	TYPE OF Container	DATE SHIPPED	TRANSPORTER	DESTINATION FACILITY
002756574GBF	Waste Flammable Liquids NOS	D001,D007, D008,D035,F003,F005	4	2,000	Drum	1/14/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002753480GBF	Waste Flammable Liquids NOS	D001,D007, D008,D035,F003,F005	7	4,200	Drum	1/22/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002759004GBF	Waste Flammable Liquids NOS	D001,D007, D008,D035,F003,F005	7	4,200	Drum	1/28/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002553125GBF	Waste Flammable Liquids NOS	D001,D007, D008,D035,F003,F005	1	600	Drum	2/12/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002553125GBF	Waste Alcohols Liquids NOS	D001	4	2,000	Drum	2/12/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002766635GBF	Waste Hydrocarbon, Liquid, NOS	D001	2	1,000	Drum	2/16/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002766635GBF	Waste Flammable Liquids NOS	D001	2	1,000	Drum	2/16/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002432167GBF	Waste Alcohols Liquids NOS	D001	6	290	Drum	2/24/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002759442GBF	Waste Alcohols Liquids NOS	D001	1	2	Drum	3/2/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
006043455FLE	Waste Flammable Solids, organic, NOS	D001, D018	7	3,171	Drum	3/12/2015	US Waste	US Ecology
006043455FLE	Waste Flammable Liquids NOS	D001, D018	9	495	Drum	3/12/2015	US Waste	US Ecology
006043455FLE	Waste Ethanol Solutions	D001	9	495	Drum	3/12/2015	US Waste	US Ecology
006043459FLE	Waste Flammable Liquid, 3 PGI	D001, D018	16	880	Drum	3/12/2016	US Waste	US Ecology
006043459FLE	Waste Flammable Solids, organic, NOS	D001, D018	4	1,412	Drum	3/17/2015	US Waste	US Ecology
006043459FLE	Waste Flammable Solids PG III	D018	2	779	Drum	3/17/2015	US Waste	US Ecology
006043521FLE	Waste Flammable Solids, organic, NOS	D001, D018	2	900	Drum	3/26/2015	US Waste	US Ecology
006043521FLE	Waste Flammable Solids, organic, NOS	D001, D018	22	1,100	Drum	3/26/2015	US Waste	US Ecology
006043521FLE	Waste Flammable Liquid, NOS	D001, D018	13	650	Drum	3/26/2015	US Waste	US Ecology
006043521FLE	Waste Flammable Liquids NOS	D001, D018	2	110	Drum	3/26/2015	US Waste	US Ecology
007156192FLE	Waste Flammable Solids, organic, NOS	D001, D018	27	1,485	Drum	4/10/2015	US Waste	US Ecology
007156192FLE	Waste Flammable Solids, organic, NOS	D001, D018	12	4,200	Drum	4/10/2015	US Waste	US Ecology
007156192FLE	Waste Flammable Liquids NOS	D001	3	165	Drum	4/10/2015	US Waste	US Ecology
007156192FLE	Waste Flammable Liquids NOS	D001	10	550	Drum	4/10/2015	US Waste	US Ecology
007156256FLE	Waste Flammable Solids, organic, NOS	D001, D018	29	11,600	Drum	4/29/2015	US Waste	US Ecology
007156256FLE	Waste Flammable Liquids NOS	D001, D018	15	825	Drum	4/29/2015	US Waste	US Ecology
007156283FLE	Waste Flammable Solids, organic, NOS	D001, D018	26	1,430	Drum	5/6/2015	US Waste	US Ecology
007156283FLE	Waste Flammable Liquids NOS	D001, D018	7	385	Drum	5/6/2015	US Waste	US Ecology
007156283FLE	Waste Toxic Solids, Organic, NOS	D018	2	110	Drum	5/6/2015	US Waste	US Ecology
002901519GBF	Waste Hydrocarbon, Liquid, NOS	D001	3	750	Drum	5/15/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002901519GBF	Waste Alcohols Liquids NOS	D001	7	2,450	Drum	5/15/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002432102GBF	Waste Alcohols Liquids NOS	D001	4	1,800	Drum	5/18/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
007156295FLE	Waste Flammable Solids, organic, NOS	D001, D018	17	2,115	Drum	5/26/2015	US Waste	US Ecology

002765917GBF	Waste Alcohols Liquids NOS	D001	4	200	Drum	6/1/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002765917GBF	Waste Flammable Liquids NOS	D001, D018	7	3,500	Drum	6/1/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
007156340FLE	Waste Flammable Liquids NOS	D001, D035, F003, F005	1	300	Drum	6/11/2015	US Waste	US Ecology
007156340FLE	Waste Flammable Solids, organic, NOS	D001, D018	4	1,200	Drum	6/11/2015	US Waste	US Ecology
007156340FLE	Ammonium Nitrate Based Fertiizer	D001	9	800	Drum	6/11/2015	US Waste	US Ecology
007156368FLE	Waste Flammable Liquids NOS	D001,D018	18	5,400	Drum	6/29/2015	US Waste	US Ecology
007156368FLE	Waste Flammable Liquids NOS	F005, D001, D018	14	4,200	Drum	6/29/2015	US Waste	US Ecology
007156368FLE	Waste Alcohols Liquids NOS	D001	15	495	Drum	6/29/2015	US Waste	US Ecology
002765918GBF	Paint Waste	D001,D007, D008,D035,F003,F005	1	450	Drum	7/8/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002432044GBF	Paint Waste	D001,D007, D008,D035,F003,F005	4	1,800	Drum	7/16/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874515GBF	Waste Flammable Liquids NOS	D001, D018	10	4,500	Drum	8/6/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002885608GBF	Waste Flammable Liquids NOS	D001, D018	29	13,050	Drum	8/13/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002885609GBF	Waste Flammable Liquids NOS	D001, D018	28	12,600	Drum	8/13/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002889816GBF	Waste Flammable Liquids NOS	D001, D018	4	1,550	Drum	8/18/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874503GBF	Waste Flammable Liquids NOS	D001, D018	9	4,050	Drum	8/20/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874501GBF	Waste Flammable Liquids NOS	D001, D018	4	1,800	Drum	8/27/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874502GBF	Waste Flammable Liquids NOS	D001, D018	11	4,950	Drum	8/27/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002891823GBF	Waste Flammable Liquids NOS	D001, D018	23	9,775	Drum	9/1/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874492GBF	Waste Flammable Liquids NOS	D001, D018	12	5,100	Drum	9/2/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874492GBF	Paint Waste	D001,D007, D008,D035,F003,F005	4	2,000	Drum	9/2/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874486GBF	Waste Flammable Liquids NOS	D001, D018	3	1,050	Drum	9/8/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002897082GBF	Waste Flammable Liquids NOS	D001, D018	1	425	Drum	9/10/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874493GBF	Waste Flammable Liquids NOS	D001,D018	1	50	Drum	9/15/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002432036GBF	Paint Waste	D001,D007, D008,D035,F003,F005	1	450	Drum	9/24/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002432036GBF	Waste Flammable Liquids NOS	D001,D018	1	250	Drum	9/24/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002432037GBF	Paint Waste	D001,D007, D008,D035,F003,F005	1	500	Drum	10/1/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002432037GBF	Waste Flammable Liquids NOS	D001,D018	1	400	Drum	10/1/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002965972GBF	Waste Alcohols Liquids NOS	D001	24	10,200	Drum	10/6/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002962447GBF	Waste Alcohols Liquids NOS	D001	13	5,525	Drum	10/8/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002963710GBF	Combustible Liquid NOS (Acetone, Toluene)	F003, F005	5	2,125	Drum	10/13/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group

002963710GBF	Wast Alcohols Liquids NOS	D001	32	13,600	Drum	10/13/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874444GBF	Waste Flammable Liquids NOS	D001,D018	37	15,725	Drum	10/14/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874443GBF	Waste Flammable Liquid NOS MEK	D001, D018, D035, F005	6	2,550	Drum	10/15/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874443GBF	Waste Flammable Liquids NOS	D001,D018	4	1,700	Drum	10/15/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874443GBF	Waste Alcohols Liquids NOS	D001	13	5,525	Drum	10/15/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874440GBF	Waste Flammable Liquids NOS	F005, D001, D018, D035	7	2,975	Drum	10/20/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002425407GBF	Waste Flammable Liquid NOS	D001, D018	15	6,375	Drum	10/27/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002425407GBF	Waste Alcohols Liquids NOS	D001	10	4,250	Drum	10/27/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002425407GBF	Waste Flammable Liquids NOS	F005, D001, D018, D035	5	2,125	Drum	10/27/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002968890GBF	Waste Flammable Liquids NOS	D001,D018	8	3,200	Drum	10/29/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002968890GBF	Waste Alcohols Liquids NOS	D001	18	7,650	Drum	10/29/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002977759GBF	Waste Alcohols Liquids NOS	D001	19	8,075	Drum	11/3/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874394GBF	Paint Waste	D001,D007, D008,D035,F003,F005	2	850	Drum	11/5/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874394GBF	Waste Flammable Liquids NOS	D001,D018	16	6,675	Drum	11/5/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874394GBF	Wast Alcohols Liquids NOS	D001	5	2,125	Drum	11/5/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874398GBF	Waste Alcohols Liquids NOS	D001	21	8,925	Drum	11/12/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874398GBF	Waste Flammable Liquids NOS	F005, D001, D018, D035	5	2,125	Drum	11/12/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002983039GBF	Wast Alcohols Liquids NOS	D001	37	15,725	Drum	11/17/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874380GBF	Wast Alcohols Liquids NOS	D001	27	11,475	Drum	11/17/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002983572GBF	Wast Alcohols Liquids NOS	D001	23	9,975	Drum	11/24/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002983572GBF	Waste Flammable Liquids NOS	D001,D018	10	4,000	Drum	11/24/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002985650GBF	Paint Waste	D001,D007, D008,D035,F003,F005	3	1,600	Drum	12/1/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002985650GBF	Waste Flammable Liquids NOS	D001,D018	3	1,275	Drum	12/1/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002985650GBF	Wast Alcohols Liquids NOS	D001	31	13,175	Drum	12/1/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002977388GBF	Waste Flammable Liquids NOS	D001,D018	8	3,400	Drum	12/3/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group

TOTAL POUNDS	306,919

TOTAL TONS	153

VI. Site Mailing Address	Address line 1 or PO Box: PO Box 436
	Address line 2: City, Town, or Village: Atchison
	State, Province, or Subdivision (2 letters): KS Country: UNITED STATES
	County Name: Atchison ZIP/Postal Code: 66002-
VI. Additional or Corrected Site Mailing Address	Address line 1 or PO Box:
	Address line 2: City, Town, or Village:
TYPE OR PRINT CLEARLY	State, Province, or Subdivision (2 letters): Country:
	County Name: ZIP/Postal Code:
VII. Site Contact Person	~~First Name: Don~~ MI: ~~Last Name: Lassen~~
	~~Title: EHS Manager~~
	~~Phone Number: (866) 785-4082~~ ~~Ext: 194346~~ ~~Alt. Phone Number: ()-~~
	~~Email Address: ryan.schaffer@gbwservices.com~~ ~~Fax Number: (503) 802-5458~~
	~~Address line 1 or PO Box: PO BOX 436~~
	~~Address line 2:~~ ~~City, Town, or Village: ATCHISON~~
	~~State, Province, or Subdivision (2 letters): KS~~ ~~Country: UNITED STATES~~
	~~County Name: Atchison~~ ~~ZIP/Postal Code: 66002~~
VII. Additional or Corrected Site Contact Person	First Name: Andrea MI: R. Last Name: Jones
TYPE OR PRINT CLEARLY	Title: EHS Manager
	Phone Number: (816) 785-4082 Ext: 194344 Alt. Phone Number: ( )
	Email Address: andrea.jones@gbwservices.com Fax Number: (503) 802-5458
	Address line 1 or PO Box: PO Box 436
	Address line 2: City, Town, or Village: Atchison
	State, Province, or Subdivision (2 letters): KS Country: USA
	County Name: Atchison ZIP/Postal Code: 66002

VIII. Owner and/or Operator of Site	1. (check applicable box(es)) [X] Owner [ ] Operator	Approx. date became owner &/or operator: 1/10/2008 Approx. date ceased as owner &/or operator:
	Name: GREENBRIER RAIL SVCS	
	Type (check one): [X] Private [ ] County [ ] District [ ] Federal [ ] Indian [ ] Municipal [ ] State [ ] Other	
	2. (check applicable box(es)) [ ] Owner [X] Operator	Approx. date became owner &/or operator: 7/18/2014 Approx. date ceased as owner &/or operator:
	Name: GBW Railcar Services-Atchinson	
	Type (check one): [X] Private [ ] County [ ] District [ ] Federal [ ] Indian [ ] Municipal [ ] State [ ] Other	
VIII. Additional or Corrected Owner of the Site and/or Operator of Site Add any additional owners or operators on the comment page. The property owner is not required unless said property owner also acts as the owner or operator of the activity that generates the waste	1. (check applicable box(es)) [ ] Owner [ ] Operator	Approx. date became owner &/or operator: Approx. date ceased as owner &/or operator:
	Name:	
	Type (check one): [ ] Private [ ] County [ ] District [ ] Federal [ ] Indian [ ] Municipal [ ] State [ ] Other	
	2. (check applicable box(es)) [ ] Owner [ ] Operator	Approx. date became owner &/or operator: Approx. date ceased as owner &/or operator:
	Name:	
	Type (check one): [ ] Private [ ] County [ ] District [ ] Federal [ ] Indian [ ] Municipal [ ] State [ ] Other	

IX. Type of Regulated Waste Activity: **You must put an "X" in the appropriate box(es) for the current regulated waste activity.**

The date of the signature in Section X will be used as the date the regulated waste activity(ies) you check below began. However, in Box A1, if the activity began earlier than the signature date, enter the correct date after "Date activity began" in yyyyddmm format. If any other regulated waste activity(ies) in A.2 - A.8 or Box B-E began earlier, write in the correct date(s) in Section XI; Comments. If your activity(ies) change during the year a 'Subsequent Site Identification' form should be submitted indicating the change.

Received Date: 2/17/2015 Source of Information: Notification

A. Hazardous Waste Activity(ies) at this location

1. Generator of hazardous waste (choose one of the following five categories a-e) [see rules for limits on acute hazardous waste]
   - [X] a. LQG: Greater than 999 kg/mo (2,200 lbs) of non-acute hazardous waste, **or**
   - [ ] b. SQG: 101 to 999 kg/mo (220 - 2,200 lbs) of non-acute hazardous waste, **or**
   - [ ] c. KSQG: 25 to 100 kg/mo of non-acute hazardous waste **or**
   - [ ] d. CESQG: Less than 25 kg/mo of non-acute hazardous waste **or**
   - [ ] e. Not a generator

Date activity began (mm/dd/yyyy): 2/12/2015

For Items 2 through 9, check all that apply

2. Transporter of hazardous waste **[requires a permit & registration]**
   - [ ] Transport hazardous waste
     - [ ] a. Transporter
     - [ ] b. Transfer Facility (at your site)
3. Designated facility of hazardous waste **at this location** that requires(ed) the submittal of a Part A and a permit
   - [ ] a. Treats or treated hazardous waste on-site at this location **and/or** Stores or stored hazardous waste on-site at this location **and/or** Disposes or disposed hazardous waste on-site at this location
   - [ ] b. Recycles recyclable materials on-site at this location
4. [ ] Underground injection well on-site at this location
5. [ ] Import agent for hazardous waste
6. [ ] Generates mixed radioactive waste on-site at this location
7. [ ] Short term generator
8. [ ] Receives hazardous waste from offsite
9. Exempt boiler and/or Industrial Furnace on-site at this location
   - [ ] a. Smelting, melting, and refining furnace exemption
   - [ ] b. Small quantity on-site burner exemption

B. Used Oil Activities at this location, check all that apply: (used oil generator only - go to D) [see comments for additional information]

1. Used Oil Fuel Marketer
   - [ ] a. Marketer who directs shipments of off-specification used oil to used oil burner.
   - [ ] b. Marketer who first claims the used oil meets the specifications
2. [ ] Off-specification Used Oil Burner
3. [ ] Used Oil Processor
4. [ ] Used Oil Re-refiner

Date activity began (mm/dd/yyyy):

5. Used Oil Transporter (check only one) **[may require a permit & registration]**
   - [ ] a. Transporter only
   - [ ] b. Transporter with transfer facility

C. Universal Waste Activity(ies) at this location, check all that apply:

1. Large Quantity Handler: check the box(es) for the universal wastes generated or accumulated
   - [ ] a. Generates/accumulates batteries
   - [ ] b. Generates/accumulates mercury containing equipment
   - [ ] c. Generates/accumulates pesticides
   - [ ] d. Generates/accumulates electric lamps
2. [ ] Destination Facility of Universal Waste **[a hazardous waste permit may be required for this activity]**

(Regulated Waste Activity section continues; see next page)

IX. Type of Regulated Waste Activity (continued):

D. Waste codes for federally regulated hazardous waste

D001, D006, D007, D008, D018, D035, F003, F005

X. Certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information, submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of owner, operator, or authorized representative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)
RYAN SCHAFFER	PLANT MANAGER	2/12/2015

IX. Type of Regulated Waste Activity: **You must put an "X" in the appropriate box(es) for the current regulated waste activity.**

The date of the signature in Section X will be used as the date the regulated waste activity(ies) you check below began. However, in Box A1, if the activity began earlier than the signature date, enter the correct date after "Date activity began" in yyyyddmm format. If any other regulated waste activity(ies) in A.2 - A.8 or Box B-E began earlier, write in the correct date(s) in Section XI, Comments. If your activity(ies) change during the year a 'Subsequent Site Identification' form should be submitted indicating the change.

A. Hazardous Waste Activity(ies) at this location

1. Generator of hazardous waste (choose one of the following five categories a-e) [see rules for limits on acute hazardous waste]

   [X] a. LQG: Greater than 999 kg/mo (2,200 lbs) of non-acute hazardous waste, **or**

   [ ] b. SQG: 101 to 999 kg/mo (220 - 2,200 lbs) of non-acute hazardous waste, **or**

   [ ] c. KSQG: 25 to 100 kg/mo of non-acute hazardous waste **or**

   [ ] d. CESQG: Less than 25 kg/mo of non-acute hazardous waste **or**

   [ ] e. Not a generator

Date activity began (mm/dd/yyyy): _____

For items 2 through 9, check all that apply

2. Transporter of hazardous waste **[requires a permit & registration]**

   [ ] Transport hazardous waste

   [ ] a. Transporter

   [ ] b. Transfer Facility (at your site)

3. Designated facility of hazardous waste **at this location** that requires(ed) the submittal of a Part A and a permit

   [ ] a. Treats or treated hazardous waste on-site at this location **and/or**
   Stores or stored hazardous waste on-site at this location **and/or**
   Disposes or disposed hazardous waste on-site at this location

   [ ] b. Recycles recyclable materials on-site at this location

[ ] 4. Underground injection well on-site at this location

[ ] 5. Import agent for hazardous waste

[ ] 6. Generates mixed radioactive waste on-site at this location

[ ] 7. Short term generator

[ ] 8. Receives hazardous waste from offsite

9. Exempt boiler and/or Industrial Furnace on-site at this location

   [ ] a. Smelting, melting, and refining furnace exemption

   [ ] b. Small quantity on-site burner exemption

B. Used Oil Activities at this locaiton, check all that apply: (used oil generator only - go to D) [see comments for additional information]

1. Used Oil Fuel Marketer

   [ ] a. Marketer who directs shipments of off-specification used oil to used oil burner.

   [ ] b. Marketer who first claims the used oil meets the specifications

[ ] 2. Off-specification Used Oil Burner

[ ] 3. Used Oil Processor

[ ] 4. Used Oil Re-refiner

Date activity began (mm/dd/yyyy): _____

5. Used Oil Transporter (check only one) **[may require a permit & registration]**

   [ ] a. Transporter only

   [ ] b. Transporter with transfer facility

C. Universal Waste Activity(ies) at this location, check all that apply:

1. Large Quantity Handler: check the box(es) for the universal wastes generated or accumulated

   [ ] a. Generates/accumulates batteries

   [ ] b. Generates/accumulates mercury containing equipment

   [ ] c. Generates/accumulates pesticides

   [ ] d. Generates/accumulates electric lamps

[ ] 2. Destination Facility of Universal Waste **[a hazardous waste permit may be required for this activity]**

(Regulated Waste Activity section continues; see next page)

IX. Type of Regulated Waste Activity (continued):

D. Waste codes for federally regulated hazardous waste

D001	D006	D007	D008	D018	D035	F003
F005						

X. Certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information, submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of owner, operator, or authorized representative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)
	Ryan Schaffer	02/24/2016

XI. Comments:

BEFORE COPYING FORM, ENTER SITE NAME AND EPA ID Number:

SITE NAME: GBW Railcar Services-Atchison

EPA ID Number KSD041391627 7

Kansas Department of Health and Environment

2015 Biennial Hazardous Waste Report

GM FORM

WASTE GENERATION AND MANAGEMENT

Sec. 1 A. Waste description: Paint Waste - Rail car Cleaning Waste

B. EPA hazardous waste code(s): D001 D007 D008 D035 F003 F005

C. State hazardous waste code(s) **NOT APPLICABLE IN KANSAS**

D. Source code: G06

Management Method code for Source code G25:

E. Form code: W209

F. Quantity generated in 2015: 170

UOM: TON

Density: ☐ lbs/gal ☐ sg

G. Waste minimization code: A

Sec. 2 Was any of this waste that was generated at this facility treated, disposed, and/or recycled on site?

☐ Yes (CONTINUE TO ON-SITE PROCESS SYSTEM 1)

☒ No (SKIP TO SEC. 3)

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site Management Method code	Quantity treated, disposed, or recycled on site in 2015	On-site Management Method code	Quantity treated, disposed, or recycled on site in 2015
H		H	

Sec. 3 A. Was any of this waste shipped off site in 2015 for treatment, disposal, or recycling?

☒ Yes (CONTINUE TO ITEM B)

☐ No (FORM IS COMPLETE)

	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2015
Site 1	MID 980611529 8	H141	150
Site 2	OKD000402391 6	H141	20
Site 3			

Comments:

Page __ of __

BEFORE COPYING FORM, ENTER SITE NAME AND EPA ID Number:

SITE NAME: GBW Railcar Services - Atchison

EPA ID Number KSD043913627

Kansas Department of Health and Environment

2015 Biennial Hazardous Waste Report

GM FORM

WASTE GENERATION AND MANAGEMENT

Sec. 1 A. Waste description: Rail Car Cleaning Waste

B. EPA hazardous waste code(s): D001 D018

C. State hazardous waste code(s) NOT APPLICABLE IN KANSAS

D. Source code: G11

Management Method code for Source code G25:

E. Form code: W219

F. Quantity generated in 2015: 136.0

UOM: Ton

Density: ☐ lbs/gal ☐ sg

G. Waste minimization code: A

Sec. 2 Was any of this waste that was generated at this facility treated, disposed, and/or recycled on site?

☐ Yes (CONTINUE TO ON-SITE PROCESS SYSTEM 1)

☒ No (SKIP TO SEC. 3)

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site Management Method code	Quantity treated, disposed, or recycled on site in 2015	On-site Management Method code	Quantity treated, disposed, or recycled on site in 2015
H		H	

Sec. 3 A. Was any of this waste shipped off site in 2015 for treatment, disposal, or recycling?

☒ Yes (CONTINUE TO ITEM B)

☐ No (FORM IS COMPLETE)

	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2015
Site 1	MID980615298	H141	116.0
Site 2	OKD000402396	H141	20.0
Site 3			

Comments:

Page __ of __

Loc: KANSAS CITY Route: KANSAS CITY - ROUTE 1 BO#: 00-00709KL

Please type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number KED023936277	2. Page 1 of 1/2	3. Emergency Response Phone 800-424-9300, "1"	4. Manifest Tracking Number 002756574 GBF

5. Generator's Name and Mailing Address
LBW RAILCAR SERVICES
15624 258TH RD
CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone: (866) 785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: ROBBIE D WOOD — U.S. EPA ID Number: WAD 067138561

8. Designated Facility Name and Site Address
PETRO-CHEM PROCESSING GROUP
421 Lycaste
Detroit, MI 48214

U.S. EPA ID Number: MID980615298

Facility's Phone: (313) 824-5840

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (D001, D007, D008, D035) ERG# 128					D001 D007 D008 D035
X	2. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG III, (METHYL ETHYL KETONE, DIESEL) (F005, D001, D018, D035) ERG # 128	004	DM	2000	P	F005 D001 D018 D035
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1) CC: 284351-16 TSD: HCCFBLUELS H141 2) CC: 284351-23 TSD: HCCFBLIQ 1011

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Don Lassen — Signature: Don Lassen — Month 01 Day 14 Year 15

INTL — 16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.: Transporter signature (for exports only):

TRANSPORTER — 17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT Ringgold — Signature: Matt Ringgold — Month 01 Day 14 Year 15
Transporter 2 Printed/Typed Name: R STRINGER — Signature: — Month 1 Day 20 Year 15

DESIGNATED FACILITY — 18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. H141 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: T McCullough — Signature: T McCullough — Month 1 Day 27 Year 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Loc: KANSAS CITY Route: KANSAS CITY - ROUTE 1 Bil. 41219

7-55 DK 70RB1

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD049936277
2. Page 1 of 1
3. Emergency Response Phone: 800-424-9300, "1"
4. Manifest Tracking Number: 00275[illegible]GBF

5. Generator's Name and Mailing Address: GEN RAILCAR SERVICES, 18624 258TH RD, CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone: (866) 785-4062

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: ROBBIE D WOOD — U.S. EPA ID Number: MLD067138891

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 Lycaste, Detroit, MI 48214 — U.S. EPA ID Number: MID980615298

Facility's Phone: (313) 824-5840

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG III, (METHYL ETHYL KETONE, DIESEL) (F005,D001,D018,D035) ERG# 128	007	DM	4200	P	D001 D018 F005 D035
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information: 1) CE:284361-23 TEO: HCCFBLIQ H141 1011

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Don Lassen — Signature: Don Lassen — Month 01 Day 22 Year 15

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:

Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MATT RINGOLD — Signature: Matt Ringold — Month 01 Day 22 Year 15

Transporter 2 Printed/Typed Name: R STRUEGER — Signature: — Month 1 Day 22 Year 15

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H141 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: [illegible] — Signature: [illegible] — Month 1 Day 30 Year 15

GENERATOR — INTL — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Loc: KANSAS CITY Route: KANSAS CITY - ROUTE 2 PRI 15010

WO#: 00-00717KI Entered

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 2
3. Emergency Response Phone: 800-424-9300, "I"
4. Manifest Tracking Number: 002759004 GBF

5. Generator's Name and Mailing Address
GBW RAILCAR SERVICES
18624 258TH RD
CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone: (866) 785-4062

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: Robbie D Wood — U.S. EPA ID Number: MLD067138891

8. Designated Facility Name and Site Address
PETRO-CHEM PROCESSING GROUP
421 Lycaste
Detroit, MI 48214
U.S. EPA ID Number: MID980615298

Facility's Phone: (313) 824-5840

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG III, (METHYL ETHYL KETONE, DIESEL) (F005,D001,D018,D035) ERG# 128	007	DM	4200	P	D001 D018 F005 D035
X	RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG II, (DIESEL) (D001,D018) ERG# 128					D001 D018
X	NA3082, HAZARDOUS WASTE, LIQUID, N.O.S., 9, PG III, (BENZENE, DIESEL) (D018) ERG# 171					D018
X	RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG II, (DIESEL) (D001,D018) ERG# 128					D001 D018

14. Special Handling Instructions and Additional Information (10H)
1) CC: 284351-23 TSD: RECYCLING H141 ~~2) CC: 284351-22 TSD: RECYCLING H141~~
~~3) CC: 284351-23 TSD: RECYCLING H141 4) CC: 284351-23 TSD: RECYCLING H141~~

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: X Robert Pendleton Signature: X [signature] Month 01 Day 28 Year 15

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Matt Ringgold Signature: [signature] Month 01 Day 28 Year 15
Transporter 2 Printed/Typed Name: R. Stringer Signature: [signature] Month 2 Day 3 Year 15

18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18b
Printed/Typed Name: M. Johnson Signature: [signature] Month 2 Day 1 Year 15

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

KANSAS CITY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

00-006VKB2

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 2
3. Emergency Response Phone: 800-424-9300
4. Manifest Tracking Number: 002553125 GBF

5. Generator's Name and Mailing Address
GBW RAILCAR SERVICES
15624 258TH RD
CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name
HERITAGE-CRYSTAL CLEAN, LLC
U.S. EPA ID Number: IYR000130062

7. Transporter 2 Company Name
Robbie D Wood INC
U.S. EPA ID Number: A D006713889

8. Designated Facility Name and Site Address
PETRO-CHEM PROCESSING GROUP
421 Lycaste
Detroit, MI 48214
U.S. EPA ID Number: MID980615298

Facility's Phone: (313)824-5640

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (F003,F005,D001,D007,D008) ERG# 128					F003 F005 D007 D009
X	2. RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3 PG II, (F003,F005,D001,D007,D008,D039) ERG# 128					F003 F005 D007 D008 D001 D035
X	3. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG III, (METHYL ETHYL KETONE, DIESEL) (F005, D001, D018, D035) ERG# 128	001	DM	600	P	F005 D001 D018 D035
X	4. UN1987, WASTE ALCOHOLS, N.O.S., 3, PG III, (D001) ERG# 127	004	DM	2000	P	D001

14. Special Handling Instructions and Additional Information
1) CC: 284354-2 TSD: [illegible] 2) CC: 284351-11 TSD: [illegible] 2061 -1011-
3) CC: 284351-23 TSD: HCCFBLIQ (-1011)

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Don Lossen
Signature: Don Lossen
Month Day Year: 02 12 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Transporter signature (for exports only):
Port of entry/exit:
Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT RINGWALD
Signature: [signature]
Month Day Year: 02 12 15
Transporter 2 Printed/Typed Name: R Morris
Signature: [signature]
Month Day Year: 12 18 15

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator)
Manifest Reference Number:
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. — 2. — 3. H141 4. H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: L. McCullough
Signature: [signature]
Month Day Year: 12 15 15

GENERATOR / INTL / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

KANSAS CITY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD042552277
2. Page 1 of 2
3. Emergency Response Phone:
4. Manifest Tracking Number: 002766635 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, 15624 255TH RD, CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address):

Generator's Phone:

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number:

7. Transporter 2 Company Name: Robbie D Wood — U.S. EPA ID Number: ACD 067138891

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING INC, 421 Lycaste, Detroit, MI 48213 — U.S. EPA ID Number:

Facility's Phone:

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	NA3082, HAZARDOUS WASTE, LIQUID, N.O.S., III, (BENZENE, XYLENE) (D001) ERG# 171							
X	RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG II, (DIESEL) (D001) ERG# 128							
X	RQ, UN3295, WASTE HYDROCARBONS, LIQUID, N.O.S., 3, PG II, (NAPHTHENE, BENZENE) (D001) ERG# 128	002	DM	1000	P			
X	4. RQ, UN 3286, WASTE FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S., 3, (6.1) PGII, (METHANOL QUARTER NARY AMMONIUM COMPOUNDS, QUATERNARY PHOSPHORUS COMPOUNDS)	002	DM	1000	P	D001		

14. Special Handling Instructions and Additional Information

1) SC:284351-19 TSD:HCCAMM
3) SC:284351-25 TSD:HCCAMM
4) SC:284351-26 TSD:HCCAMM 1022

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Don Lasser — Signature: Don Lasser — Month 02 Day 16 Year 15

16. International Shipments: ☐ Import to U.S. ☒ Export from U.S. — Port of entry/exit: — Date leaving U.S.:

Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Matt Ringgold — Signature: Matt Ringgold — Month 02 Day 16 Year 15

Transporter 2 Printed/Typed Name: R Stringer — Signature: — Month 12 Day 19 Year 15

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
—	—	H141	H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: L McCullough — Signature: — Month 12 Day 26 Year 15

GENERATOR / INTL / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

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72 VTA

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of
3. Emergency Response Phone:
4. Manifest Tracking Number: 002432167 GBF

5. Generator's Name and Mailing Address
GBW RAILCAR SERVICES
15624 258TH RD
CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone: 866-785-4082

6. Transporter 1 Company Name
HERITAGE-CRYSTAL CLEAN, LLC
U.S. EPA ID Number: [illegible]

7. Transporter 2 Company Name
Neier Ink
U.S. EPA ID Number: IND 984868406

8. Designated Facility Name and Site Address
PETRO-CHEM PROCESSING INC.
421 Lycaste
Detroit, MI 48213
U.S. EPA ID Number: MID 980612288

RECEIVED MAR 29 2016

Facility's Phone: [illegible]

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. NA1993, DIESEL FUEL, 3, PGIII, ERG#128					
X	2. UN1987, WASTE ALCOHOLS, N.O.S., 3, PGII, (D001) ERG#127	006	DM	290	G	D001
	3.					
	4.					

14. Special Handling Instructions and Additional Information
~~1) CC!284351-8 TSD!133305-8~~ 2) CC!284351-9 TSD!HCCFBLIQ
1100

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: X Don Lassen
Signature: X Don Lassen
Month Day Year: 02 24 15

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Transporter signature (for exports only):
Port of entry/exit:
Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Matt Ringgold
Signature: [signature]
Month Day Year: 02 24 15
Transporter 2 Printed/Typed Name: Rob True
Signature: [signature]
Month Day Year: 3 2 15

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator)
Manifest Reference Number:
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. H141 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: [illegible]
Signature: [signature]
Month Day Year: 3 10 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

72YTO

Print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KDOA 9 5 6 3 3 7
2. Page 1 of
3. Emergency Response Phone:
4. Manifest Tracking Number: 002759442 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, 15624 258TH RD, CUMMINGS, KS 66[illegible]

Generator's Site Address (if different than mailing address)

Generator's Phone:

RECEIVED MAR 27 2015

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: [illegible]

7. Transporter 2 Company Name: Robbins Oil Worldwide — U.S. EPA ID Number: KYD067155891

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 Lycaste, Detroit, MI 48214 — U.S. EPA ID Number: MI [illegible]

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1263, WASTE PAINT RELATED MATERIAL, PG II, (ECD3, ECOD, D001, D035, D040), ERG# 128							
X	2. UN1987, WASTE ALCOHOLS, N.O.S., 3, PGII, (D001) ERG#127	001	DM	2	G	D001		
	3.							
	4.							

14. Special Handling Instructions and Additional Information: 2) CC' 284351-9 TSD: HCCFBLIQ

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. 3424M

Generator's/Offeror's Printed/Typed Name: Dan Lossen — Signature: [signature] — Month 03 Day 02 Year 15

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MATT Ringold — Signature: [signature] — Month 03 Day 02 Year 15

Transporter 2 Printed/Typed Name: Robbins — Signature: [signature] — Month [illegible] Day [illegible] Year [illegible]

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H020 2. H061 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: L. McMillan — Signature: [signature] — Month 03 Day 10 Year 15

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

Invoice: 134909 Receipt 29-00 23331 Manifest 006043455FLE

23331

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD 043 938 277
2. Page 1 of: 2
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006043455 FLE

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES
15624 258TH ROAD
CUMMINGS, KS 66016
Generator's Phone:

Generator's Site Address (if different than mailing address): 15624 258TH ROAD CUMMINGS, KS 66016

6. Transporter 1 Company Name: EQ INDUSTRIAL SERVICES — U.S. EPA ID Number: MIK 435 642 742
7. Transporter 2 Company Name — U.S. EPA ID Number:
8. Designated Facility Name and Site Address: EQ OKLAHOMA, INC.
2700 South 25th West Avenue
TULSA, OK 74107
Facility's Phone: (918) 582-9595 — U.S. EPA ID Number: OKD 000 402 396

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1325, Waste Flammable solids, organic, n.o.s., 4.1, PGII, flammable, ERG #133	07	DM	317	P	D001	D018	
X	2. RQ, UN1993, Waste flammable liquid, 3, PGII, flammable, ERG #128	09	DM	495	G	D001	D018	
X	3. UN1170, Waste Ethanol solutions, 3, PGII, ERG #127	09	DM	495	G	D001		
	4. ~~Non-Regulated~~ DID NOT SHIP							

14. Special Handing Instructions and Additional Information

1. B151162EOK / Crude Oil 2. B151161EOK / Crude Oil 3. B151153EOK / ethyl anhydrous denatured ~~4. B151152EOK / Relco Brightwater~~

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Don Lossen — Signature: Don Lossen — Month 03 Day 12 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: John D. Stoffram — Signature: John D. Stoffram — Month 03 Day 12 Year 15
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy — Month Day Year
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. H141 3. H141 4. H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Bonach — Signature — Month 3 Day 12 Year 15

GENERATOR / INTL / TR. IMPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

7943837

Invoice: 136254

Receipt 29-00 23422

Manifest 006043459FLE

23422

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD 043 936 277
2. Page 1 of: 2
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006043459 FLE

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES
15624 258TH ROAD
CUMMINGS, KS 66016
Generator's Phone:

Generator's Site Address (if different than mailing address):
15624 258TH ROAD
CUMMINGS, KS 66016

6. Transporter 1 Company Name: EQ INDUSTRIAL SERVICES — U.S. EPA ID Number: MIK 435 642 742
7. Transporter 2 Company Name — U.S. EPA ID Number:
8. Designated Facility Name and Site Address: EQ OKLAHOMA, INC.
2700 South 25th West Avenue
TULSA, OK 74107
Facility's Phone: (918) 582-9595
U.S. EPA ID Number: OKD 000 402 396

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1993, Waste flammable liquid, 3, PGI, flammable, ERG #128	16 ~~34~~	DM	880 ~~1870~~	G	D001	D018	
X	2. RQ, UN1325, Waste Flammable solids, organic, n.o.s., 4.1, PGII, flammable, ERG #133	04 ~~11~~	DM	1412 ~~3887~~	P	D001	D018	
X	3. ~~Non Hazardous Liquid Waste, Not Dot Not RCRA Regulated~~ UN2811, waste toxic solid, organic, n.o.s. (Naphth), 6.1, PGIII ERG#154	02	DM	779	P	D018		
	4. NON HAZARDOUS SOLID WASTE, NOT DOT NOT RCRA REGULATED	04	DM	1456	P			

14. Special Handling Instructions and Additional Information

1. B151181EOK / Crude Oil 2. B151182EOK / Crude Oil 3. ~~C151069EOK / Fish Oil~~ C151073EOK (spent) 4. C151070EOK / Oily Waste/ Floor Dry/ Antifreeze

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Dan Lossen — Signature: Dan Lossen — Month 03 Day 17 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: John D. Statham — Signature: John D Statham — Month 03 Day 17 Year 15
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
OK TO CORRECT LINE 1 & 2 QUANTITIES PER MATT CROSSON 3/20/15 —

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141	H141	NONE

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Pmacke — Signature: — Month 3 Day 17 Year 15

GENERATOR — TRANSPORTER — INT'L — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

7966518

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD 043 936 277
2. Page 1 of 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 006043521 FLE

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES
15624 258TH ROAD
CUMMINGS, KS 66016
Generator's Phone:

Generator's Site Address (if different than mailing address): 15624 258TH ROAD CUMMINGS, KS 66016

6. Transporter 1 Company Name: EQ INDUSTRIAL SERVICES — U.S. EPA ID Number: MIK 435 642 742
7. Transporter 2 Company Name — U.S. EPA ID Number:
8. Designated Facility Name and Site Address: EQ OKLAHOMA, INC
2700 South 25th West Avenue
TULSA, OK 74107
Facility's Phone: (918) 582-9595
U.S. EPA ID Number: OKD 000 402 396

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1993, Waste flammable liquid n.o.s.(toluene,napthalene), 3, PGII, flammable, ERG #128	37 13	DM	6500	G	D001	D018	
X	2. RQ, UN1325, Waste Flammable solids organic, n.o.s., 4.1, PGII, flammable ERG #133	02	DM	900	P	D001	D018	
X	3. ~~UN2811, Waste Toxic solids, organic, n.o.s., 6.1, PGIII, ERG #154~~ Ring UN1993, Waste flammable liquids, n.o.s. (toluene), 3, PG II, ERG #128	2	DM	110	G	~~D018~~		
X	4. ~~UN1993, Waste Flammable liquid, n.o.s., 3, PGII, ERG #128~~ RQ, UN1325, Waste flammable solids, organic, n.o.s. (benzene, toluene), 4.1, PG II, D001, erg #133	22	DM	110	G	~~D001~~ D001	D018	

14. Special Handling Instructions and Additional Information

1. B151161EOK / Crude Oil 2. B151162EOK / Crude Oil 3. C151073EOK / Asphalt 4. B151166EOK / Ethyl Alcohol

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Don Lassen — Signature: Don Lassen — Month 03 Day 26 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: John D. Statham — Signature: John D. Statham — Month 03 Day 26 Year 15
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. H141 3. H141 4. H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: [illegible] — Signature: [illegible] — Month 03 Day 26 Year 15

GENERATOR / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Invoice: 144388 Receipt 29-00 23919 Manifest 007156192FLE

23919

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD 043 936 277
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 007156192 FLE

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES - CUMMIN
15624 258TH ROAD
CUMMINGS, KS 66016
Generator's Phone:

Generator's Site Address (if different than mailing address): 15624 258TH ROAD CUMMINGS, KS 66016

6. Transporter 1 Company Name: EQ INDUSTRIAL SERVICES — U.S. EPA ID Number: MIK 435 842 742
7. Transporter 2 Company Name — U.S. EPA ID Number:
8. Designated Facility Name and Site Address: EQ OKLAHOMA, INC. 2700 South 25th West Avenue TULSA, OK 74107 — U.S. EPA ID Number: OKD 000 402 396
Facility's Phone: (918) 582-9595

GENERATOR

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN3175, Waste flammable solid organic n.o.s.(toluene,napthalene), 4.1 flammable. ERG #133	027	DM	1485	G	D001	D018	
X	2. RQ, UN1325, Waste Flammable solids, organic, n.o.s. (Benzene, Toluene), 4.1 PGII, flammable, ERG #133	012	DM	4200	P	D001	D018	
X	3. RQ, UN1993, Waste Flammable liquids, n.o.s. (Ethyl alcohol), 3, PGII, ERG #128	003	DM	165	G	D001		
X	4. UN1993, Waste Flammable liquids, n.o.s., 3, PGIII, ERG #128	010	DM	550	G	D001		

14. Special Handling Instructions and Additional Information
B151162EOK
1. B151161EOK / Crude Oil - thick 2. B151162EOK / Crude Oil 3. B151168EOK / Ethyl Alcohol 4. C151182EOK / NO 2 Diesel Fuel

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Deena Christopher — Signature: Deena Christopher — Month 04 Day 10 Year 15

INTL

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: John Statham — Signature — Month 04 Day 10 Year 15
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy — Month Day Year
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Pure waste online 1 to B151162EOK to Muskhuasee, OK per Matthew 4/13
18b. Alternate Facility (or Generator) — Manifest Reference Number:
Facility's Phone: — U.S. EPA ID Number
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. H141 3. H141 4. H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Mmacl — Signature — Month 14 Day 13 Year 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

8043944

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD 043 936 277
2. Page 1 of 1
3. Emergency Response Phone: (800) 494-9300
4. Manifest Tracking Number: 007156256 FLE

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES - CUMMI
15624 258TH ROAD
CUMMINGS, KS 66016
Generator's Phone:

Generator's Site Address (if different than mailing address): 15624 258TH ROAD CUMMINGS, KS 66016

6. Transporter 1 Company Name: EQ INDUSTRIAL SERVICES — U.S. EPA ID Number: MIK 435 642 742

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: EQ OKLAHOMA, INC.
2700 South 25th West Avenue
TULSA, OK 74107
Facility's Phone: (918) 582-9595
U.S. EPA ID Number: OKD 000 402 396

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1325, Waste Flammable solids, organic, n.o.s. (Benzene, Toluene), 4.1, PGII, flammable, ERG #133	29	DM	11600	P	D001	D018	
X	2. RQ, UN1993, Waste flammable liquid n.o.s.(toluene,napthalene), 3, PGII flammable, ERG #128	15	DM	880	G	D001	D018	
X	3. ~~UN1993, Waste Flammable liquids, n.o.s., 3, PGIII, ERG #128~~					D001		
X	4. ~~RQ, UN1993, Waste Flammable liquids, n.o.s. (Ethyl alcohol), 3, PGII, ERG #128~~ NON REGULATED DOT HAZARDOUS MATERIAL (ETHYL ALCOHOL)	04 06	DM	385	G	~~D001~~		

14. Special Handling Instructions and Additional Information

1. B151182EOK / Crude Oil 2. B151181EOK / Crude Oil ~~3. C151182EOK / NO 2 Diesel Fuel~~ ~~4. B151188EOK / Ethyl Alcohol~~ Disposal of Ethyl Alcohol under Contract 112

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Clifford E. Hogan — Signature: [signature] — Month 04 Day 29 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: John D. Statham — Signature: [signature] — Month 04 Day 29 Year 15
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
CK TO COMPLETE OT (1) LINE 3 & 4 CK [illegible] MATERIAL LINE 4 CK MATL CHECKED 4/13/15
18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141	H141	H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: [illegible] — Signature: [signature] — Month Day Year

GENERATOR — TRANSPORTER — INT'L — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

24440

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD 043 936 277
2. Page 1 of 2
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 007156283 FLE

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES - CUMMI
15624 258TH ROAD
CUMMINGS, KS 66016
Generator's Phone:

Generator's Site Address (if different than mailing address):
15624 258TH ROAD
CUMMINGS, KS 66016

6. Transporter 1 Company Name: EQ INDUSTRIAL SERVICES — U.S. EPA ID Number: MIK 435 642 742

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: EQ OKLAHOMA, INC.
2700 South 25th West Avenue
TULSA, OK 74107
Facility's Phone: (918) 582-9595
U.S. EPA ID Number: OKD 000 402 396

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1 RQ, UN1325, Waste Flammable solids, organic, n.o.s. (Benzene, Toluene), 4.1 PGII, flammable, ERG #133	26 ~~02~~	DM	~~700~~ 1430	P	D001	D018	
X	2. RQ, UN1993, Waste flammable liquid n.o.s.(toluene,napthalene), 3, PGII, flammable, ERG #128	7 ~~29~~	DM	385 ~~1595~~	G	D001	D018	
X	3. ~~RQ, UN1993, Waste Flammable liquids, n.o.s. (Ethyl alcohol), 3, PGII, ERG #128~~ Non RCRA, Non DOT Regulated waste	12 ~~13~~	DM	660 ~~715~~	G	~~D001~~		
X	4. UN2811, Waste Toxic solids, organic, n.o.s., 6.1, PGIII, ERG #154	2 ~~02~~	DM	110 ~~800~~	P	D018		

14. Special Handling Instructions and Additional Information

1. B151162EOK / Crude Oil 2 B151161EOK / Crude Oil 3. ~~B151168EOK~~ / Ethyl Alcohol 4. C151073EOK / Asphalt
D151137EOK high water

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Robert Pendleton — Signature: [signature] — Month 05 Day 06 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: John D. Statham — Signature: [signature] — Month 05 Day 06 Year 15
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☑ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Move waste on line 3 to approve D151137EOK to match waste correct quantities
On all lines to match waste, ok for Mot
Manifest Reference Number: 5/19
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141	H141	H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Pmacip — Signature: [signature] — Month 5 Day 7 Year 15

GENERATOR — INTL — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Loc: KANSAS CITY PR: 150420

Route: KANSAS CITY - ROUTE 2 783AB

13-55 1100 AM D 8-56 400 pm NO#: 00-[illegible]

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: IND043936277
2. Page 1 of: 1
3. Emergency Response Phone: 800-424-9300, "1"
4. Manifest Tracking Number: 002901519 GBF

5. Generator's Name and Mailing Address: GEN RAILCAR SERVICES, 18624 288TH RD, CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address):

Generator's Phone: (866) 785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: ROBBIE D WOOD — U.S. EPA ID Number: WLD 067138891

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 Lycaste, Detroit, MI 48214 — U.S. EPA ID Number: MID980615298

Facility's Phone: (313) 624-5840

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	RQ, UN3295, WASTE HYDROCARBONS, LIQUID, N.O.S., 3, PG II, (OCT-1-ENE, DEC-1-ENE) (D001) ERG# 128	3	DM	750	P	D001
X	~~RQ, UN3295, WASTE FLAMMABLE LIQUID, TOXIC, ORGANIC, N.O.S., 3, (6.1), PG II, (NAPHTHA, QUARTERNARY AMMONIUM COMPOUND, AROMATIC HYDROCARBON COMPOUND) (D001) ERG# 131~~					D001
X	~~RQ, UN3294, WASTE FLAMMABLE LIQUID, TOXIC, ORGANIC, N.O.S., 3, (6.1), PG II, (NAPHTHA, QUARTERNARY AMMONIUM COMPOUND) (D001) ERG# 131~~					D001
X	4. UN1987, Waste Alcohols, N.O.S., 3, PGII, (D001) ERG#127	7	DM	2450	P	D001

14. Special Handling Instructions and Additional Information

1) CC: 284351-26 TSD: HCCFBLIQ 1000 H141
3) ~~CC: 284351-27~~ TSD: HCCMM- H141
2) ~~CC: 284351-26~~ TSD: HCCMM H141
4) CC: 284351-9 TSD: HCCFBLIQ 1000

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. 897519

Generator's/Offeror's Printed/Typed Name: X Ryan Diefenbach — Signature: X Ryan Diefenbach — Month 05 Day 15 Year 15

TRANSPORTER INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of Entry/Exit: Date leaving U.S.:
Transporter signature (for exports only):

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Tyler Cooper — Signature: Tyler Cooper — Month 05 Day 15 Year 15
Transporter 2 Printed/Typed Name: R STRINGER — Signature: [illegible] — Month 5 Day 21 Year 15

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. — 3. — 4. H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: S. Jabalee — Signature: S. Jabalee — Month 06 Day 05 Year 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

* Federal Uniform *

1014 1080 20072 PB: 140214

Loc: KANSAS CITY

Route: 2

4-55 up on BOL#: 815734

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 2
3. Emergency Response Phone: 800-424-9300, "1"
4. Manifest Tracking Number: 002432102 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, 15624 258TH RD, CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone: 866-785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: ROBBIE D WOOD — U.S. EPA ID Number: WLD062138891

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 Lycaste, Detroit, MI 48214 — U.S. EPA ID Number: MID980615298

Facility's Phone: (313) 824-8840

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. UN1987, WASTE ALCOHOLS, N.O.S., 3, PG II, (D001) ERG #127	004	DM	1800	P	D001		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information: DCC: 284351-9 TSD: HCCFBLIQ 1000

15. GENERATOR/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. 89733

Generator/Offeror's Printed/Typed Name: Andrew Jones — Signature: [signature] — Month 10 Day 18 Year 15

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:

Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MATT Ringgold — Signature: [signature] — Month 10 Day 18 Year 15

Transporter 2 Printed/Typed Name: R STRUBLER — Signature: [signature] — Month 10 Day 21 Year 15

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H061 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: J. Jabalee — Signature: [signature] — Month 10 Day 23 Year 15

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Invoice: 150971 Receipt 29-00 24829 Manifest 007156295FLE

24829

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD 043 936 277
2. Page 1 of: 2
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 007156295 FLE

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES - CUMMI
15624 258TH ROAD
CUMMINGS, KS 66016
Generator's Phone:

Generator's Site Address (if different than mailing address): 15624 258TH ROAD CUMMINGS, KS 66016

6. Transporter 1 Company Name: EQ INDUSTRIAL SERVICES — U.S. EPA ID Number: MIK 435 642 742
7. Transporter 2 Company Name — U.S. EPA ID Number:
8. Designated Facility Name and Site Address: EQ OKLAHOMA, INC
2700 South 25th West Avenue
TULSA, OK 74107
Facility's Phone: (918) 582-9595 — U.S. EPA ID Number: OKD 000 402 396

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN1325, Waste Flammable solids, organic, n.o.s. (Benzene, Toluene), 4.1 PGII, flammable, ERG #133	~~17~~ 04	DM	2115 ~~1400~~	P	D001 D018
X	2. RQ, UN1993, Waste flammable liquid n.o.s.(toluene,napthalene), 3 PGII flammable, ERG #128	0 ~~13~~	DM	0 ~~715~~	G	D001 D018
X	~~3. RQ, UN1993, Waste flammable liquids, 3, PGI~~					~~D001 D035 F005~~
	4. Non regulated DID NOT SHIP					
		35	DM	1925	G	

14. Special Handling Instructions and Additional Information
1. B151162EOK / Crude Oil ~~2. B151161EOK / Crude Oil~~ ~~3. B151165EOK / Paint Waste~~ 4. D151137EOK/Ethanol/water ~~G151125EOK / Solid Vegetable Oil~~

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrea Jones — Signature: [signature] — Month 05 Day 26 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: John D. Stotham — Signature: [signature] — Month 05 Day 26 Year 15
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy — Month Day Year
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
OK TO MOVE LINE 2 WASTE TO LINE 1 PER MATT CIRDSIM 5/28/15
18b. Alternate Facility (or Generator) — Manifest Reference Number:
Facility's Phone — U.S. EPA ID Number
18c. Signature of Alternate Facility (or Generator)

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) — Month Day Year
1. H141 2. H141 3. ~~H141~~ 4. NONE

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Bmackey — Signature: [signature] — Month 5 Day 27 Year 15

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

8157752

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number
2. Page 1 of
3. Emergency Response Phone
4. Manifest Tracking Number: 002765517 GBF

5. Generator's Name and Mailing Address
Generator's Site Address (if different than mailing address)
Generator's Phone:

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name: ROBBIE D WOOD — U.S. EPA ID Number: WCD 067135871

8. Designated Facility Name and Site Address — U.S. EPA ID Number
Facility's Phone:

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. [illegible]					
X	2. UN1987, WASTE ALCOHOLS, N.O.S., 3, PG II, (D001) ERG#127	001	DM	200	G	D001
X	3. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., PG II, (DIESEL) (D001, D018) ERG# 128	007	DM	3500	P	D001 D018
	4.					

14. Special Handling Instructions and Additional Information
3) CC: 284351-22 TSD: HCCFBLIQ
2) CC: 284351-9 TSD: HCCFBLIQ

15. GENERATOR/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator/Offeror's Printed/Typed Name — Signature — Month 06 Day 01 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT RINGOLD — Signature — Month 06 Day 01 Year 15
Transporter 2 Printed/Typed Name: R STRINGER — Signature — Month 6 Day 1 Year 15

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. H061 3. H111 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a
Printed/Typed Name — Signature — Month Day Year

GENERATOR / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

25158

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD 043 936 277
2. Page 1 of 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 007156340 FLE

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES - CUMMI
15624 258TH ROAD
CUMMINGS, KS 66016
Generator's Phone:

Generator's Site Address (if different than mailing address)
15624 258TH ROAD
CUMMINGS, KS 66016

6. Transporter 1 Company Name: EQ INDUSTRIAL SERVICES
U.S. EPA ID Number: MIK 435 642 742

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: EQ OKLAHOMA, INC.
2700 South 25th West Avenue
TULSA, OK 74107
Facility's Phone: (918) 582-9595
U.S. EPA ID Number: OKD 000 402 396

9a HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. ~~RQ, UN1993, Waste flammable liquids, n.o.s. (Ethyl alcohol), 3, PGII, ERG #128~~ Non RCRA, Non DOT Regulated Material	11	DM	605	G	~~D001~~		
X	2. RQ, UN1993, Waste flammable liquids, 3, PGI	01	DM	55	G	D001	D035	F003
						F005		
X	3. RQ, UN1325, Waste Flammable solids, organic, n.o.s. (Benzene, Toluene), 4.1 PGII, flammable, ERG #133	04	DM	1200	P	D001	D018	
X	4. UN2071, Ammonium nitrate based fertilizer, 9, PGIII, ERG #140	09	DM	495	G			

14. Special Handling Instructions and Additional Information
D151137EOK
1. ~~B151100EOK~~ / Ethyl Alcohol – 2. B151165EOK / Paint Waste 3. B151182EOK / Crude Oil 4. C151008EOK / Natural Fertilizer Solution
Highwaste

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrea Jones
Signature:
Month 06 Day 11 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: John D. Statham
Signature:
Month 06 Day 11 Year 15
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☒ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
move waste on line 1 to approval D151137EOK to matchwaste, ok per Matt Crosby
18b. Alternate Facility (or Generator) Manifest Reference Number:
U.S. EPA ID Number
Facility's Phone
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141	H141	H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Bmack
Signature:
Month 16 Day 12 Year 15

GENERATOR | TRANSPORTER | INT'L | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Invoice: 161992

Receipt 29-00 25527

Manifest 007156368FLE

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

25527

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD 043 938 277

2. Page 1 of 12

3. Emergency Response Phone: (800) 424-9300

4. Manifest Tracking Number: 007156368 FLE

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES - CUMMI
15624 258TH ROAD
CUMMINGS, KS 66016

Generator's Phone:

Generator's Site Address (if different than mailing address): 15624 258TH ROAD CUMMINGS, KS 66016

6. Transporter 1 Company Name: EQ INDUSTRIAL SERVICES — U.S. EPA ID Number: MIK 435 642 742

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: EQ OKLAHOMA, INC.
2700 South 25th West Avenue
TULSA, OK 74107
Facility's Phone: (918) 582-9595 — U.S. EPA ID Number: OKD 000 402 396

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN1993, Waste flammable liquid n.o.s.(toluene,naphthalene), 3, PGII, flammable, ERG #128	18 21	DM	1155	G	D001 D018
	2. Non RCRA, Non DOT Hazardous Material (Ethyl alcohol & water)	01	DM	55	G	
X	3. RQ, UN1993, Waste flammable liquid n.o.s.(toluene,naphthalene), 3, PGII, D001, ERG #128	14 17	DM	935	G	F005 D001 D018
X	4. UN1170, Waste Ethanol solutions, 3, PGII, ERG #127	15 09	DM	495	G	D001

14. Special Handling Instructions and Additional Information

1. B151161EOK / Crude Oil 2. D151137EOK / Ethyl Alcohol 3. F158413EOK / Crude Oil 4. B151153EOK / ethyl anhydrous denatured

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrea Jones — Signature: [signature] — Month 06 Day 29 Year 15

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: John D. Statham — Signature: [signature] — Month 06 Day 29 Year 15
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy — Month Day Year
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
OK TO CHANGE LINES 1,3,4 QUANTITES PER MATT CROSSM 7/2/15
18b. Alternate Facility (or Generator) — Manifest Reference Number:
Facility's Phone: — U.S. EPA ID Number
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. H141 3. H141 4. H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a
Printed/Typed Name: [illegible] — Signature: [signature] — Month 7 Day 1 Year 15

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 6700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

8272802

Loc: KANSAS CITY Route: KANSAS CITY - ROUTE 2 Manifest: 815725

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of: 1 of 2
3. Emergency Response Phone: 800-424-9300, #17
4. Manifest Tracking Number: 002765918 GBF

5. Generator's Name and Mailing Address: GBF FALLON SERVICES, 15824 255TH RD, CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone: 8661785-4062

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: Robbie D Ward, Inc — U.S. EPA ID Number: MLD 067135891

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 Lycaste, Detroit, MI 48214 — U.S. EPA ID Number: MID980615298

Facility's Phone: (313)824-5840

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN3082, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, PG III, (D001, D035) ERG# 128					D001
X	2. RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (F003, F005, D001, D007, D008, D035) ERG# 128	001	DM	450	P	F003 F005 D001 D007 D008 D035
	3.					
	4.					

GENERATOR

14. Special Handling Instructions and Additional Information

~~1)CC:128351-22 INTI ACCESLIQ 2347~~

2)CC:284351-11 TSD:HCCSOLIDS 1011 2877

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrea Jones — Signature: X — Month 07 Day 08 Year 15

INTL

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. — Port of entry/exit: — Date leaving U.S.:

Transporter signature (for exports only):

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MATT RINGGOLD — Signature: Matt Ringgold — Month 07 Day 08 Year 15

Transporter 2 Printed/Typed Name: R. STRINGER — Signature: — Month 07 Day 14 Year 15

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number:

Facility's Phone: — U.S. EPA ID Number

18c. Signature of Alternate Facility (or Generator)

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. — 2. H141 — 3. — 4. — Month Day Year

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: S. Jabalee — Signature: S. Jabalee — Month 07 Day 24 Year 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Federal Uniform 1014 1086 20072 PS: 140214

Loc: KANSAS CITY Route: 2 4-55 PM 50L EO#: 841589

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KS0043936277
2. Page 1 of 27
3. Emergency Response Phone: 800-424-9300, "1"
4. Manifest Tracking Number: 002432044 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, 15624 258TH RD, CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone: 866-785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: [illegible] — U.S. EPA ID Number: ALD981773891

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 Lycaste, Detroit, MI 48214 — U.S. EPA ID Number: MID980615298

Facility's Phone: (313) 824-5840

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (F003, F005, D001, D007, D008, D035) ERG #128	004	DM	1800	P	F003 D007	F005 D008	D001 D035
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information: 1) CC: 284351-11 TSD: HCCSOLIDS 1011 35957

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrea Jones — Signature: [signature] — Month 07 Day 16 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MATT RINGGOLD — Signature: [signature] — Month 07 Day 16 Year 15

Transporter 2 Printed/Typed Name: [illegible] — Signature: [signature] — Month 7 Day 20 Year 15

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H141 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: S. Jabalee — Signature: S. Jabalee — Month 08 Day 04 Year 15

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Federal Uniform 1014 1088 20072 2B: 150612

Loc: KANSAS CITY Route: 2 10-55tom-LIQ BOL#: 815730

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 1
3. Emergency Response Phone: 800-424-9300 #1
4. Manifest Tracking Number: 002874515 GBF

5. Generator's Name and Mailing Address:
GBW RAILCAR SERVICES
15624 258TH RD
CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone: 8661-785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: ROBBIE D WOOD, INC — U.S. EPA ID Number: WLD067138891

8. Designated Facility Name and Site Address:
PETRO-CHEM PROCESSING GROUP
421 Lycaste
Detroit, MI 48214

U.S. EPA ID Number: MID980615298

Facility's Phone: (313)824-5840

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S, 3, PG11, (DIESEL) (D001, D018) ERG#128	010	DM	4500	P	D001	D018	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1) CC: 284351-22 TSD: HCCFBLIQ 1011
* Request Return to Customer

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: [illegible] Signature: Andrea Jones Month Day Year: 08 16 15

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Matt Ringgold Signature: [illegible] Month Day Year: 08 16 15
Transporter 2 Printed/Typed Name: R STRINGER Signature: [illegible] Month Day Year: 8 17 15

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) Manifest Reference Number:
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Amanda Vangblad Signature: [illegible] Month Day Year: 08 17 15

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Loc: KANSAS CITY Route: KANSAS CITY - ROUTE 2 7LGX8

WO#: 00-~~007LGX8~~

29-55 DK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 2
3. Emergency Response Phone: 800-424-9300, "1"
4. Manifest Tracking Number: 002885608 GBF

5. Generator's Name and Mailing Address:
GBW RAILCAR SERVICES
15624 258TH RD
CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone: (866) 785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: ROBBIE D WOOD INC — U.S. EPA ID Number: MCD067138891

8. Designated Facility Name and Site Address:
PETRO-CHEM PROCESSING GROUP
421 Lycaste
Detroit, MI 48214

U.S. EPA ID Number: MID980615298

Facility's Phone: (313) 824-5840

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	~~1 RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (F003,F005,D001,D007,D008,D035) ERG# 128~~					~~F003~~ ~~D008~~	~~F005~~ ~~D001~~	~~D007~~ ~~D035~~
X	2 RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PGII, (DIESEL) (D001, D018) ERG# 128	029	DM	13,050	P	D001	D018	
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1) ~~CC: 284351-11 TRB: HCCBCLTDS H961~~
2) CC: 284351-22 TSD: HCCFBLIQ 1011

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrea Jones — Signature: [signature] — Month 08 Day 13 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT RINGGOLD — Signature: [signature] — Month 08 Day 13 Year 15
Transporter 2 Printed/Typed Name: R. SPRINGER — Signature: [signature] — Month 8 Day 20 Year 15

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) Manifest Reference Number:
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. H141 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: S. Jabalee — Signature: S. Jabalee — Month 08 Day 28 Year 15

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Lo[illegible] ANSAS CITY Route: KANSAS CITY - ROUTE 2 28-55 OK WO#: 00-00[illegible] 7L3L4

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number KSD043936277	2. Page 1 of 1 2	3. Emergency Response Phone 800-424-9300, "1"	4. Manifest Tracking Number 002885609 GBF

5. Generator's Name and Mailing Address
GBW RAILCAR SERVICES
15624 258TH RD
CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone: (866) 785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: Robbie D Woodin — U.S. EPA ID Number: Charles

8. Designated Facility Name and Site Address
PETRO-CHEM PROCESSING GROUP
421 Lycaste
Detroit, MI 48214

U.S. EPA ID Number: MID980615298

Facility's Phone: (313) 824-5840

	9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	X	~~RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (F003,F005,D001,D007,D008,D035) ERG# 128~~					F003 D008	F005 D001	D007 D035
	X	2 RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG II, (DIESEL) (D001, D018) ERG# 128	028	DM	12 600	P	D001	D018	
		3.							
		4.							

14. Special Handling Instructions and Additional Information
1) ~~CC: 284351-11 TSD: SSCBOLIDS D061~~
2) CC: 284351-22 TSD: HCCFBLIQ - 1011 ✓ SS66I

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: [illegible] Signature: Andree Jones Month Day Year: 08 13 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Matt Ringgold Signature: [illegible] Month Day Year: 08 13 15
Transporter 2 Printed/Typed Name: [illegible] Signature: [illegible] Month Day Year: 8 12 15

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) Manifest Reference Number:
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. H141 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Amanda Vanchleed Signature: [illegible] Month Day Year: 9 1 15

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Loc: KANSAS CITY Route: KANSAS CITY - ROUTE 2 BOL#: 00-08 TMLCG

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 1
3. Emergency Response Phone: 800-424-9300, "1"
4. Manifest Tracking Number: 002889816 GBF

5. Generator's Name and Mailing Address
GBW RAILCAR SERVICES
15624 258TH RD
CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone: (866)785-8082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: ROBERTS D WOOD, INC — U.S. EPA ID Number: MLD067138891

8. Designated Facility Name and Site Address
PETRO-CHEM PROCESSING GROUP
421 Lycaste
Detroit, MI 48214

U.S. EPA ID Number: MID980615298

Facility's Phone: (313)824-5840

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	~~UN1225, WASTE FLAMMABLE SOLIDS, ORGANIC, N.O.S., 4.1, PG III, (TOLUENE, ETHANOL) (F003,F005) ERG# 133~~	0		0		F003 F005
X	RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (F003,F005,D001,D007,D008,D035) ERG# 128	0		0		F003 F005 D007 D008 D001 D035
X	~~UN1987, WASTE ALCOHOLS, N.O.S., 3, PG II, (D001) ERG# 127~~	0		0		D001
X	4. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG II, (DIESEL) (D001, D018) ERG# 128	004	DM	1550	P	D001 D018

14. Special Handling Instructions and Additional Information
~~1) CC:284351-4 TSD:HCCSOLIDE H061~~ ~~2) CC:284351-11 TSD:HCCSOLIES H061~~
~~3) CC:284351-3 TSD:HCCFBLIQ H061~~ 4) CC:284351-22 TSD: HCCFBLIQ

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. 5716I

Generator's/Offeror's Printed/Typed Name: Ken Dietenbach — Signature: [signature] — Month 08 Day 18 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT RINGGOLD — Signature: [signature] — Month 08 Day 18 Year 15
Transporter 2 Printed/Typed Name: R STRINGER — Signature: [signature] — Month 8 Day 28 Year 15

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4. H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: S. Jabalee — Signature: S. Jabalee — Month 09 Day 04 Year 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

* Federal Uniform * 1014 1060 20072 25: 150612

Loc: KANSAS CITY Route: 2 9-55 Cr#: 7PB19

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 1
3. Emergency Response Phone: 800-424-9300, #1
4. Manifest Tracking Number: 002874503 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, 15624 258TH RD, CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone: 866+785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: NEIER — U.S. EPA ID Number: IND984868400

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 Lycaste, Detroit, MI 48214 — U.S. EPA ID Number: MID980615298

Facility's Phone: (313)824-5840

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG II, (DIESEL) (D001, D018) ERG#128	009	DM	4050	P	D001	D018	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information: DCC: 284351-22. TSD: HCCFBLIQ 1011 5919

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrea Jones — Signature: [signature] — Month Day Year: 08 20 15

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:

Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Matt Rinczyski — Signature: [signature] — Month Day Year: 08 20 15

Transporter 2 Printed/Typed Name: Fred Cooper — Signature: [signature] — Month Day Year: 8 20 15

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H061 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: S. Jabalee — Signature: S. Jabalee — Month Day Year: 09 04 15

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

* Federal Uniform * 1014 1068 20072 PS: 150612

LOC: KANSAS CITY Route: 2 4-55 on WO#: 7P1YB

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 2
3. Emergency Response Phone: 800-424-9300, "1"
4. Manifest Tracking Number: 002874501 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, 15624 258TH RD, CUMMINGS, KS 66016
Generator's Site Address (if different than mailing address)*
Generator's Phone: 866-785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: Robbie D. Wood INC. — U.S. EPA ID Number: AUN167198891

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 Lycaste, Detroit, MI 48214 — U.S. EPA ID Number: MID980615298
Facility's Phone: (313) 824-5840

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG II, (DIESEL) (D001, D018) ERG#128	004	DM	1800	P	D001	D018	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1) CC: 284351-22 TSD: HCCFBLIQ
1011
64587

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrea Jones — Signature: [signature] — Month 08 Day 27 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT Rinaygold — Signature: [signature] — Month 08 Day 27 Year 15
Transporter 2 Printed/Typed Name: Jason Carver — Signature: [signature] — Month 9 Day 2 Year 15

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: S. Jabalee — Signature: S. Jabalee — Month 09 Day 15 Year 15

GENERATOR / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

+ Federal Uniform +

1014 1068 20072 PB: 150613

Loc: KANSAS CITY Route: 2 11-55 DM #O#: 7MLCH

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 1
3. Emergency Response Phone: 800-424-9300, *1*
4. Manifest Tracking Number: 002874502 GBF

5. Generator's Name and Mailing Address
GBW RAILCAR SERVICES
15624 258TH RD
CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone: 866-785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: Robbie D. Wood INC. — U.S. EPA ID Number: ACD067138891

8. Designated Facility Name and Site Address
PETRO-CHEM PROCESSING GROUP
421 Lycaste
Detroit, MI 48214

U.S. EPA ID Number: MID980615298

Facility's Phone: (313) 824-5840

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG II, (DIESEL) (D001, D018) ERG# 128	011	DM	4950	P	D001	D018	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
DCC: 284351-22 TSD: HCCFBLIQ
1011
GUST

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrea Jones — Signature: X — Month Day Year: 08 27 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT RINGGOLD — Signature: Matt Ringgold — Month Day Year: 08 27 15
Transporter 2 Printed/Typed Name: Jason Caner — Signature: Jason Caner — Month Day Year: 8 12 15

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H061 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: S. Jabalee — Signature: S. Jabalee — Month Day Year: 09 15 15

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Loc: KANSAS CITY Route: KANSAS CITY - ROUTE 2 PB: 150810 WO#: 00-007P1YD

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 23-55 DK Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 1 2
3. Emergency Response Phone: 800-424-9300, "1"
4. Manifest Tracking Number: 002891823 GBF

5. Generator's Name and Mailing Address
GBW RAILCAR SERVICES
15624 258TH RD
CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone: (866)785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: NFI EP — U.S. EPA ID Number: IL 9845624 66

8. Designated Facility Name and Site Address
PETRO-CHEM PROCESSING GROUP
421 Lycaste
Detroit, MI 48214

U.S. EPA ID Number: MID980615298

Facility's Phone: (313)824-5840

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (F003,F005,D001,D007,D008,D035) ERG# 128					F003 F005 D007 D008 D001 D035
X	2. RQ, UN1993, WASTE FLAMMABLE LIQUIDS N.O.S., 3, PGII, (DIESEL) (D001, D018) ERG# 128	023	DM	9775	P	D001 D018
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1) CC: 284351-11 TSD: HCCSOLIDS 8051
2) CC: 284351-22 TSD: HCCFBLIQ 1011

6786T

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

GENERATOR — Generator's/Offeror's Printed/Typed Name: Andrea Jones — Signature: X — Month 09 Day 01 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER INTL

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT RINGGOLD — Signature: — Month 09 Day 01 Year 15
Transporter 2 Printed/Typed Name: BRIAN GROTHAUSE — Signature: — Month 09 Day 01 Year 15

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
18b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. H141 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: S. Jabalee — Signature: S. Jabalee — Month 09 Day 18 Year 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Federal Uniform 1014 1086 20072 15061

LOC: KANSAS CITY Route: 2 16-55 Rec'd: 7P1-YC 16-55

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	KSD043936277	2 2	800-424-9300, "1"	002874492 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, 15624 258TH RD., CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address):

Generator's Phone: 860-785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: ROBBIE D WOOD, INC — U.S. EPA ID Number: ALD067135891

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 Lycaste, Detroit, MI 48214 — U.S. EPA ID Number: MID980615298

Facility's Phone: (313)824-5840

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt/Vol.	13. Waste Codes		
X	1. RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (F003, F005, D001, D007, D008, D035) ERG# 128	004	DM	2000	P	F003 D007	F005 D008	D001 D035
X	2. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG II, (DIESEL) (D001, D018) ERG# 128	012	DM	5100	P	D001	D018	
	3.							
	4.							

14. Special Handling Instructions and Additional Information

1) CC: 284351-11 TSD: HCCSOLIDS 1011

2) CC: 284351-22 TSD: HCCFBLIQ 1011 6915I

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrea Jones — Signature — Month 09 Day 02 Year 15

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MATT RINGGOLD — Signature — Month 09 Day 02 Year 15

Transporter 2 Printed/Typed Name: R. STRINGER — Signature — Month 9 Day 9 Year 15

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number:

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141		

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: S. Jabalee — Signature — Month 09 Day 21 Year 15

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Federal Uniform 1014 1066 25072

LOC: KANSAS CITY Route: 2 3-55-DM.UQ 7PPN9

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 2
3. Emergency Response Phone: 800-424-9300, "1"
4. Manifest Tracking Number: 002874486 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES
15624 258TH RD
CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone: 866-785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: KDB TB D WOOD, Inc — U.S. EPA ID Number: ALD067135891

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP
421 Lycaste
Detroit, MI 48214

U.S. EPA ID Number: MID980615298

Facility's Phone: (313)526-5290

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PGII, (DIESEL)(D001, D018) ERG# 128	003	DM	1050	P	D001	D018	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
DCC: 284351-22 TSD: HCCFBLIQ
1011

72627

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Ryan Diefenbach — Signature: X Ryan — Month 09 Day 08 Year 15

INT'L

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S.
Transporter signature (for exports only): Port of entry/exit: Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT Ringgold — Signature — Month 09 Day 08 Year 15
Transporter 2 Printed/Typed Name: R. STRATBERG — Signature — Month 9 Day 15 Year 15

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
18b. Alternate Facility (or Generator) — Manifest Reference Number — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Amanda Vangblad — Signature — Month 9 Day 25 Year 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Loc: KANSAS CITY Route: KANSAS CITY - ROUTE 2 1-55-DM-CCD

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of: 1
3. Emergency Response Phone: 800-424-9300, "1"
4. Manifest Tracking Number: 002897082 GBF

NOW: 00-007PPRB
Form Approved. OMB No. 2050-0039

GENERATOR

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, 15624 258TH RD, CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address):

Generator's Phone: (866) 785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: ROBBIE D WOOD, INC — U.S. EPA ID Number: IAD067138891

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 Lycaste, Detroit, MI 48214 — U.S. EPA ID Number: MID980615298

Facility's Phone: (313) 824-5840

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt/Vol.	13. Waste Codes
X	1. RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (D003,F005,D001,D007,D008,D035) ERG# 128					F003 F005 D007 D008 D001 D035
X	2. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PGII, (DIESEL) (D001, D018) ERG# 128	001	DM	425	P	D001 D018
	3.					
	4.					

14. Special Handling Instructions and Additional Information

1) ~~CC: 284351-11 TSD: HCCSOLIDS 3001~~

2) CC: 284351-22 TSD: HCCFBLIQ 1011

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Ryan Diefenbach — Signature: [signature] — Month 09 Day 10 Year 15

TRANSPORTER INTL

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. — Port of entry/exit: — Date leaving U.S.:

Transporter signature (for exports only):

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MATT RINGOLD — Signature: [signature] — Month 09 Day 10 Year 15

Transporter 2 Printed/Typed Name: R STRINGER — Signature: [signature] — Month 09 Day 15 Year 15

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number:

Facility's Phone:

18c. Signature of Alternate Facility (or Generator)

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. — 2. H141 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Amanda Vangblad — Signature: [signature] — Month 09 Day 25 Year 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Print or type. (Form designed for use on elite (12-pitch) typewriter.) 2 7RE52

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 2
3. Emergency Response Phone:
4. Manifest Tracking Number: 002874493 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, P.O. BOX 436, ATCHISON, KS 66002

Generator's Site Address (if different than mailing address): GBW RAILCAR SERVICES, 15624 258TH RD, CUMMINGS, KS 66016

Generator's Phone:

6. Transporter 1 Company Name: [illegible]
U.S. EPA ID Number:

7. Transporter 2 Company Name: ROBBIE D WOOD, INC
U.S. EPA ID Number: ACD067138891

8. Designated Facility Name and Site Address: [illegible] CHEM [illegible], 421 L[illegible]ste, [illegible] MI [illegible]
U.S. EPA ID Number:

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG II, (DIESEL) D001, D018 ERG# 128	001	DM	50	G	D001	D018	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information: DCC: 284351-22 TSD: HCCFBLIQ

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrew Spears — Signature: [signature] — Month 09 Day 15 Year 15

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MATT RINGGOLD — Signature: [signature] — Month 09 Day 15 Year 15

Transporter 2 Printed/Typed Name: R STRINGER — Signature: [signature] — Month 09 Day 22 Year 15

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number:
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H061 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: S. Jabalee — Signature: S. Jabalee — Month 10 Day 07 Year 15

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

KANSAS CITY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

2

755RW

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277

2. Page 1 of 2

3. Emergency Response Phone: [illegible]

4. Manifest Tracking Number: 002432036 GBF

5. Generator's Name and Mailing Address
GBW RAILCAR SERVICES
P.O. BOX 436
ATCHISON, KS 66002

Generator's Site Address (if different than mailing address)

Generator's Phone: 866-785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: [illegible]

7. Transporter 2 Company Name: ROBBIE D WOOD, INC — U.S. EPA ID Number: MCD067138891

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING INC., 421 Lycaste, Detroit, MI 48213 — U.S. EPA ID Number: [illegible]

Facility's Phone: [illegible]

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (F003, F005, D001, D007, D008, D035) ERG# 128	001	DM	450	P	F003	F005	D001
						D007	D008	D035
X	2. RQ, UN1993, WASTE FLAMMABLE LIQUIDS N.O.S., 3, PG II, (DIESEL) (D001, D018) ERG# 128	001	DM	250	P	D001	D018	
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1) CC: 284351-11 TSD: HCCSOLIDS 1011
2) CC: 284351-22 TSD: HCCFBLLQ 1011

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: X Andrea Jones — Signature: X [signature] — Month Day Year: 09 24 15

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. — Port of entry/exit: — Date leaving U.S.:
Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT Ringgold — Signature: [signature] — Month Day Year: 09 24 15
Transporter 2 Printed/Typed Name: R STRUBER — Signature: [signature] — Month Day Year: 9 29 15

18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. H141 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: S. Jabalee — Signature: S Jabalee — Month Day Year: 10 08 15

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

KANSAS CITY

Type or print (Form designed for use on elite (12-pitch) typewriter.)

ROUTE: 2 271-55 271-55

879263

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 1
3. Emergency Response Phone: 800-424-9300
4. Manifest Tracking Number: 002432037 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, P.O. BOX 436, ATCHISON, KS 66002

Generator's Site Address (if different than mailing address): GBW RAILCAR SERVICES, 15624 258TH RD, CUMMINGS, KS 66016

Generator's Phone: 866-TAS-4048

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: [illegible] D. Wood Inc — U.S. EPA ID Number: [illegible]

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 Lycaste, Detroit, MI 48214 — U.S. EPA ID Number: MID980615298

Facility's Phone: (313) 824-5640

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (F003, F005, D001, D007, D008, D035) ERG# 128	001	DM	500	P	F003	F005	D001
						D007	D008	D035
X	2. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG II, (DIESEL) (D001, D018) ERG# 128	001	DM	400	P	D001	D018	
	3.							
	4.							

1) CC: 284351-11 TSD: HCCSOLIDS 1011

2) CC: 284351-22 TSD: ~~HCCFBLIQ~~ HCCSOLIDS 1011

15. **GENERATOR/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrew Jones — Signature: [signature] — Month 10 Day 01 Year 15

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. — Port of entry/exit: — Date leaving U.S.:

Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Matt Ringgold — Signature: [signature] — Month 10 Day 01 Year 15

Transporter 2 Printed/Typed Name: R Strickler — Signature: [signature] — Month 10 Day 6 Year 15

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H141 2. H141 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: [illegible] — Signature: [illegible] — Month 10 Day 14 Year 15

GENERATOR — INTERNATIONAL SHIPMENTS — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

KANSAS CITY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

7THCY

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of: 12
3. Emergency Response Phone: 800-424-9300
4. Manifest Tracking Number: 002965972 GBF

5. Generator's Name and Mailing Address: GBH RAILCAR SERVICES, PO BOX 436, ATCHISON, KS 66002

Generator's Site Address (if different than mailing address): GBH RAILCAR SERVICES, 1004 S 8TH ST, ATCHISON, KS

Generator's Phone: (866)785-4062

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: IL8000130062

7. Transporter 2 Company Name: Rees Inc — U.S. EPA ID Number: IND984884406

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 Lycaste, Detroit, MI 48214 — U.S. EPA ID Number: MID981015296

Facility's Phone: (313)824-3642

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (F003 F005, D001, D007, D008, D039) ERG# 128					F003	F005	D001
						D007	D008	D039
X	2. UN1987, WASTE ALCOHOLS, N.O.S., 3, PG11, (D001) ERG# 127	024	DM	10,200	P	D001		
	3.							
	4.							

14. Special Handling Instructions and Additional Information

~~1) CC:284351-11 TSD: HCCFBLIQ HCC~~

2) CC: 284351-9 TSD: HCCFBLIQ 1000

9365

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable International and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrea Jones — Signature: X — Month 10 Day 06 Year 15

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Matt Ringgold — Signature: Matt Ringgold — Month 10 Day 06 Year 15

Transporter 2 Printed/Typed Name: Stephen Quick — Signature: [illegible] — Month 10 Day 13 Year 15

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. | 2. H141 | 3. | 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: S. Jabalee — Signature: S. Jabalee — Month 10 Day 23 Year 15

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

 DESIGNATED FACILITY TO GENERATOR

7THDO

(Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of 2	3. Emergency Response Phone	4. Manifest Tracking Number
	[illegible]			002962447 GBF

5. Generator's Name and Mailing Address
[illegible]
PO BOX 426
[illegible]

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name
[illegible]

U.S. EPA ID Number

7. Transporter 2 Company Name
Robert D Woodlink

U.S. EPA ID Number
A1006138891

8. Designated Facility Name and Site Address
PETRO-CHEM PROCESSING INC
421 Lycaste
Detroit, MI 48213

U.S. EPA ID Number

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. [illegible]					
X	2. UN1987, WASTE ALCOHOLS, N.O.S., 3, PG II, (D001) ERG #127	013	DM	5525	P	D001
	3.					
	4.					

14. Special Handling Instructions and Additional Information
[illegible]
2) CC: 284351-9 TSD: HCCFBLIQ 1000 9250F

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrea Jones
Signature: X
Month 10 Day 08 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MATT Ringwald
Signature:
Month 10 Day 08 Year 15

Transporter 2 Printed/Typed Name: R Charles
Signature:
Month 10 Day 15 Year 15

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. — 2. H141 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Amanda Youngblood
Signature:
Month 10 Day 22 Year 15

GENERATOR | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Route: KANSAS CITY - ROUTE 2 37-55

00-007V69E

(Printed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
KBD043936277	1	800-424-9300	002963710 GBF

5. Generator's Name and Mailing Address: RAILCAR SERVICES, BOX 436, HUTCHISON, KS 66002

Generator's Site Address (if different than mailing address): CBN RAILCAR SERVICES, 15624 258TH ST, DUNNINGTON, MO 64036

Generator's Phone: (660) 785-4352

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILD000130062

7. Transporter 2 Company Name: Heim Inc — U.S. EPA ID Number: IWD984868406

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 Lycaste, Detroit, MI 48214 — U.S. EPA ID Number: MID980615299

Facility's Phone: (313) 824-2844

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (F003,F005,D001,D007,D008,D035) ERG# 128					~~F003~~	~~F005~~	~~D007~~ D008 D001 D035
X	2. UN1987, WASTE ALCOHOLS, N.O.S., 3, PG III, (D001) ERG#127	032	DM	13600	P	D001		
X	3. NA1993, COMBUSTIBLE LIQUID, N.O.S., PG III, (ACETONE, TOLUENE) ERG#128	005	DM	2125	P	F003	F005	
	4.							

14. Special Handling Instructions and Additional Information

1) CC: 284351-11 TSD: HCCFBLIQ 3361

2) CC: 284351-9 TSD: HCCFBLIQ (000)

3) CC: 284351-17 TSD: 133305-17

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator/Offeror's Printed/Typed Name: Andrea Jones — Signature: X — Month 10 Day 13 Year 15

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:

Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MATT RINGGOLD — Signature: — Month 10 Day 13 Year 15

Transporter 2 Printed/Typed Name: Stephen Quirk — Signature: — Month 10 Day 20 Year 15

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
—	H141	H141	—

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: S. Jabalee — Signature: S. Jabalee — Month 11 Day 03 Year 15

GENERATOR — INTL — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

print or type. (Form designed for use on elite (12-pitch) typewriter.) 2 37-55 solid on 7V69D

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of: 1 of 2
3. Emergency Response Phone:
4. Manifest Tracking Number: 002374444 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, P.O. BOX 436, ATCHISON, KS 66002

Generator's Site Address (if different than mailing address): GBW RAILCAR SERVICES, 15624 258TH RD, CUMMINGS, KS 66016

Generator's Phone: 866-785-4082

6. Transporter 1 Company Name: [illegible]
U.S. EPA ID Number:

7. Transporter 2 Company Name: Neier
U.S. EPA ID Number: 984Y6X406

8. Designated Facility Name and Site Address: [illegible] 421 [illegible] Detroit [illegible]
U.S. EPA ID Number:

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG II, (DIESEL)(D001, D018) ERG #128	037	DM	15725	P	D001	D018	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information: DCC. 209351-22 TSD: HEC SOLIDS 1011 9892

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: X Andrew Jeffries — Signature: X — Month 10 Day 14 Year 15

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Matt Ringgold — Signature: [signature] — Month 10 Day 14 Year 15

Transporter 2 Printed/Typed Name: E. Losh — Signature: [signature] — Month 10 Day 21 Year 15

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number:

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H141 2. 3. [signature] 4. 10-27-15

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: S. Jabalee — Signature: S. Jabalee — Month 11 Day 02 Year 15

GENERATOR / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 2 755RX

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 2
3. Emergency Response Phone:
4. Manifest Tracking Number: 002374443 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, P.O. BOX 436, ATCHISON, KS 66002

Generator's Phone:

Generator's Site Address (if different than mailing address): GBW RAILCAR SERVICES, 15624 258TH RD, CUMMINGS, KS 66016

6. Transporter 1 Company Name: [illegible]

U.S. EPA ID Number:

7. Transporter 2 Company Name: NEGER

U.S. EPA ID Number: [illegible]

8. Designated Facility Name and Site Address: [illegible], 421 [illegible]

U.S. EPA ID Number:

Facility's Phone:

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PGIII, (METHYL ETHYL KETONE, DIESEL) (F005, D001, D018, D035) ERG# 128	006	DM	2550	P	F005 D035	D001	D018
X	2. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S, 3, PGII, (DIESEL) (D001, D018) ERG# 128	004	DM	1700	P	D001	D018	
X	3. UN1987, WASTE ALCHOLS, N.O.S., 3, PG II (D001) ERG# 127	013	DM	5525	P	D001		
	4.							

14. Special Handling Instructions and Additional Information

1) CC: 284351-23 TSD: HCCFBLIQ 3) CC: 284351-9 TSD: HCCFBLIQ

2) CC: 284351-22 - TSD: HCCSOLIDS 021915

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrea Jones

Signature: [signature]

Month Day Year: 10 15 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Matt Ringgold

Signature: [signature]

Month Day Year: 10 15 15

Transporter 2 Printed/Typed Name: Brian Cantrell

Signature: [signature]

Month Day Year: 10 22 15

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) Manifest Reference Number:

U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141	H141	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: S. Tabler

Signature: [signature]

Month Day Year: 11 10 15

GENERATOR / INTL / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

...m designed for use on elite (12-pitch) typewriter.)

2 7

75VTE

Form Approved. OMB No. 2050-0039

...AZARDOUS ...TE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	KSD043936277	1		002374440 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, P.O. BOX 436, ATCHISON, KS 66002

Generator's Site Address (if different than mailing address): GBW RAILCAR SERVICES, 15624 258TH RD, CUMMINGS, KS 66016

Generator's Phone: 866-785-4082

6. Transporter 1 Company Name: [illegible] U.S. EPA ID Number: [illegible]

7. Transporter 2 Company Name: [illegible] 317-722-4340 U.S. EPA ID Number: IND984868406

8. Designated Facility Name and Site Address: [illegible] U.S. EPA ID Number: [illegible]

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PGIII, (METHYL ETHYL KETONE, DIESEL) (F005, D001, D018, D035) ERG #128	007	DM	2975	P	F005 D035	D001	D018
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information: DCC: 284351-23 TSD: HCCFBLIQ 1011

0021J

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

GENERATOR — Generator's/Offeror's Printed/Typed Name: [illegible] Signature: [illegible] Month 10 Day 20 Year 15

INTL — 16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER — 17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MATT RINGGOLD Signature: [illegible] Month 10 Day 20 Year 15

Transporter 2 Printed/Typed Name: JAMIE [illegible] Signature: [illegible] Month 10 Day 27 Year 15

DESIGNATED FACILITY — 18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: S. Jabalee Signature: S. Jabalee Month 11 Day 10 Year 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

[redacted] HAZARDOUS WASTE
Print or Type. (Form designed for use on elite (12-pitch) typewriter.)

2

7WJEB

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of: 4
3. Emergency Response Phone:
4. Manifest Tracking Number: 002425407 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, PO BOX 436, ATCHISON, KS 66002
Generator's Site Address (if different than mailing address): GBW RAILCAR SERVICES, 15624 258TH RD, CUMMINGS, KS 66016
Generator's Phone: 866-785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN
U.S. EPA ID Number:

7. Transporter 2 Company Name: NRICH INC
U.S. EPA ID Number: TXD984614406

8. Designated Facility Name and Site Address: SOTA CHEM [illegible], 421 LYCASTE, DETROIT, MI [illegible]
U.S. EPA ID Number:
Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PGII, (DIESEL)(D001, D018) ERG #128	015	DM	6375 [redacted]	P	D001	D018	
X	2. UN1987, WASTE ALCOHOLS, N.O.S., 3, PGII, (D001) ERG #127	010	DM	4250	P	D001		
X	3. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PGIII, (METHYL ETHYL KETONE, DIESEL)(F005, D001, D018, D035) ERG #128	005	DM	2125	P	F005 D035	D001	D018
	4.							

14. Special Handling Instructions and Additional Information
1) CC: 284351-22 TSD: HCCSOLIDS 1011 3) CC: 284351-23 TSD: HCCFBLIQ 1011
2) CC: 284351-9 TSD: HCCFBLIQ 1000

02365

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

GENERATOR — Generator's/Offeror's Printed/Typed Name: Andrea Jones — Signature: X — Month 10 Day 27 Year 15

INTL — 16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

TRANSPORTER — 17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT Ringgold — Signature: [signature] — Month 10 Day 27 Year 15
Transporter 2 Printed/Typed Name: SCAN Wheeler — Signature: [signature] — Month 11 Day 5 Year 15

DESIGNATED FACILITY — 18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. H141 3. H061 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: S. Jabalee — Signature: S. Jabalee — Month 11 Day 17 Year 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

[redacted] CITY

[redacted] or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: [redacted]
2. Page 1 of 2
3. Emergency Response Phone: [redacted]
4. Manifest Tracking Number: 002968890 GBF

App

5. Generator's Name and Mailing Address
[redacted] RAILCAR SERVICE
PO BOX 436
[redacted]

Generator's [redacted] different than [redacted] address

Generator's Phone: [redacted]

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN LC — U.S. EPA ID Number: [redacted]

7. Transporter 2 Company Name: Neier — U.S. EPA ID Number: IND 984868406

8. Designated Facility Name and Site Address
PETRO-CHEM PROCESSING GROUP
421 Lycaste
Detroit, MI 48214

U.S. EPA ID Number: [redacted]

Facility's Phone: 313-824-5540

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1. RQ, UN1263, WASTE PAINT RELATED MATERIAL, PG II, (F003,F005,D001,D008,D035) ERG 128							
X	2. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S, 3, PG II, (DIESEL)(D001, D018) ERG #128	008	DM	3200	P	D001	D018	
X	3. UN1987, WASTE ALCOHOLS, N.O.S., 3, PG II, (D001) ERG #127	018	DM	7650	P	D001		
	4.							

14. Special Handling Instructions and Additional Information
[redacted]
2) CC: 284351-22 TSD: HCCSOLIDS 1011
3) CC: 284351-9 TSD: HCCFBLIQ 1000

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrea Jones — Signature: [signature] — Month 10 Day 29 Year 15

12601J

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Matt Rinegold — Signature: [signature] — Month 10 Day 29 Year 15
Transporter 2 Printed/Typed Name: Howard Maxwell — Signature: Howard Maxwell — Month 11 Day 12 Year 15

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. — 2. H141 3. H141 4. —

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: S. Jabalee — Signature: S. Jabalee — Month 11 Day 23 Year 15

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

 DESIGNATED FACILITY TO GENERATOR

KANSAS CITY Route: KANSAS CITY - DETROIT 12-05 DK

Type or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number KSD043936277	2. Page 1 of 1/2	3. Emergency Response Phone 800-424-9300	4. Manifest Tracking Number 002977759 GBF

5. Generator's Name and Mailing Address
GBW RAILCAR SERVICES
PO BOX 436
ATCHISON, KS 66002

Generator's Site Address (if different than mailing address)
GBW RAILCAR SERVICES
324 25th Rd
Cummings, KS

Generator's Phone: (866) 765-6082

6. Transporter 1 Company Name
HERITAGE-CRYSTAL CLEAN, LLC
U.S. EPA ID Number
LLAD0130062

7. Transporter 2 Company Name
None
U.S. EPA ID Number
IND984968406

8. Designated Facility Name and Site Address
PETRO-CHEM PROCESSING GROUP
421 Lycaste
Detroit, MI 48214
U.S. EPA ID Number
MID980615290

Facility's Phone: (313) 824-5640

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. NA, UN1263, ~~WASTE~~ PAINT RELATED MATERIAL, 3, PG II, (F002, F005, D001, D007, D008, D035) ERG# 128					F003 F005 D001 D007 D008 D035
X	2. UN1987, WASTE ALCOHOLS, N.O.S., 3, PG II, (D001) ERG# 127	019	DM	8075	P	D001
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1) ~~[illegible]~~
2) CC: 284351-9 TSD: HCCFBLIQ 1000

12/6/15

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Hudson Jones
Signature: [signature]
Month Day Year: 11 13 15

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S.
Transporter signature (for exports only):
Port of entry/exit:
Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT RINGGOLD
Signature: [signature]
Month Day Year: 11 13 15
Transporter 2 Printed/Typed Name: Howard Maxwell
Signature: Howard Maxwell
Month Day Year: 11 12 15

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator)
Manifest Reference Number:
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. Z 2. H141 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: S. Jabalee
Signature: S. Jabalee
Month Day Year: 11 23 15

GENERATOR | INTL | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

type. (Form designed for use on elite (12-pitch) typewriter.) 2 7X86M 7

Form Approved. OMB No. 2050-0039

FORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 4
3. Emergency Response Phone:
4. Manifest Tracking Number: 002374394 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, P.O. BOX 436, ATCHISON, KS 66002

Generator's Site Address (if different than mailing address): GBW RAILCAR SERVICES, 15624 258TH RD, CUMMINGS, KS 66016

Generator's Phone: 866 785-4082

6. Transporter 1 Company Name: [illegible]
U.S. EPA ID Number:

7. Transporter 2 Company Name: NEED
U.S. EPA ID Number: IND 984868406

8. Designated Facility Name and Site Address: [illegible], 421 L-[illegible]
U.S. EPA ID Number: [illegible]

Facility's Phone:

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. UN1987, WASTE ALCOHOLS, N.O.S., 3, PG II, (D001) ERG#127	005	DM	2125	P	D001		
X	2. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG II, (DIESEL) (D001, D018) ERG#128	005	DM	2000	P	D001	D018	
X	3. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG II, (DIESEL) (D001, D018) ERG#128	011	DM	4675	P	D001	D018	
X	4. RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (F003, F005, D001, D007, D008, D035) ERG#128	002	DM	850	P	F003	F005	D001
						D007	D008	D035

14. Special Handling Instructions and Additional Information

1) CC: 284351-9 TSD: HCCFBLIQ 1003 3) CC: 284351-22 TSD: HCCSOLIDS 1011

2) CC: 284351-22 TSD: HCCSOLIDS 1011 4) CC: 284351-11 TSD: HCCSOLIDS 1011

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrew Jones X
Signature:
Month 11 Day 05 Year 15

GENERATOR

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MATT RINGGOLD
Signature:
Month 11 Day 05 Year 15

Transporter 2 Printed/Typed Name: MILLARD HARRIS JR
Signature:
Month 11 Day 17 Year 15

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) Manifest Reference Number:
U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141	H141	H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: S. Jabalee
Signature: S. Jabalee
Month 11 Day 25 Year 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO STATE

D21 55 LIQUID 2 2) 5 55 DM SOLID 7VVX9

Type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of: 12
3. Emergency Response Phone: 800-424-9300
4. Manifest Tracking Number: 002874398 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, P.O. BOX 436, ATCHISON, KS 66002
Generator's Phone: 866-785-4082

Generator's Site Address (if different than mailing address): GBW RAILCAR SERVICES, 15624 258TH RD, CUMMINGS, KS 66016

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC
U.S. EPA ID Number: [illegible]

7. Transporter 2 Company Name: [illegible] ALLIED
U.S. EPA ID Number: IND095485654

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 Lycaste, Detroit, MI 48214
U.S. EPA ID Number: [illegible]
Facility's Phone: [illegible]

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. UN1987, WASTE ALCOHOLS, N.O.S., 3, PGII, (D001) ERG#127	021	DM	8925	P	D001		
X	2. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PGIII, (METHYL ETHYL KETONE, DIESEL) (F005, D001, D018, D035) ERG#128	005	DM	2125	P	F005 D035	D001	D018
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1) CC! 284351-9 TSD! HCCFBLIQ
2) CC! 284351-23 TSD HCCFBLIQ 12895

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

GENERATOR

Generator's/Offeror's Printed/Typed Name: Andrew Davis
Signature: [signature]
Month 11 Day 12 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Transporter signature (for exports only):
Port of entry/exit:
Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT RINGGOLD
Signature: [signature]
Month 11 Day 12 Year 15

Transporter 2 Printed/Typed Name: MILLARD HARRIS JR
Signature: [signature]
Month 11 Day 20 Year 15

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator)
Manifest Reference Number:
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. H141 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: S. Jabalee
Signature: S. Jabalee
Month 11 Day 30 Year 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

design (pitch) typewrite

HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD045936291
2. Page 1 of 2
3. Emergency Response Phone:
4. Manifest Tracking Number: 002983039 GBF

Form Approved OMB No. 2050-0039

Generator's Name and Mailing Address:
BN RAILCAR SERVICES
PO BOX 436
ATCHISON, KS 66002

Generator's Site Address (if different than mailing address):

Generator's Phone:

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC
U.S. EPA ID Number: [illegible]

7. Transporter 2 Company Name: Never
U.S. EPA ID Number: [illegible]

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP
421 Lycaste
Detroit, MI 48213
U.S. EPA ID Number: [illegible]

Facility's Phone: (313) 834-5841

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1163, DIMETHYLHYDRAZINE, 6.1, PG II, TOXIC FOR INHAL DUST, PROH. [illegible]							
X	2. UN1987, WASTE ALCOHOLS, N.O.S., 3, PGII, (D001) ERG#127	037	DM	15,725	P	D001		
	3.							
	4.							

14. Special Handling Instructions and Additional Information
[illegible]
2) CC: 284351-9 TSD: HCCFBLIQ ICCO 2079

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Ryan Dietenbach
Signature: X Ryan D
Month 11 Day 17 Year 15

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S.
Port of entry/exit:
Transporter signature (for exports only):
Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MATT Ringg. ll
Signature:
Month 11 Day 17 Year 15

Transporter 2 Printed/Typed Name: Howard Maxwell
Signature: Howard Maxwell
Month 11 Day 23 Year 15

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator)
Manifest Reference Number:
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. H141 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: S. Jabalee
Signature: S. Jabalee
Month 12 Day 07 Year 15

GENERATOR — INTL — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Form designed for use on elite (12-pitch) typewriter.

7YM55

Form Approved. OMB No. 2050-0039

HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 2
3. Emergency Response Phone:
4. Manifest Tracking Number: 002374380 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, P.O. BOX 436, ATCHISON, KS 66002

Generator's Site Address (if different than mailing address):

Generator's Phone: 866-785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: [illegible]

7. Transporter 2 Company Name: Neier — U.S. EPA ID Number: IND984868406

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING INC., 421 Lycaste, Detroit, MI 48214 — U.S. EPA ID Number: [illegible]

Facility's Phone: 313-824-1030

8a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. UN1987, WASTE ALCOHOLS, N.O.S., 3, PG II, (D001) ERG# 127	027	DM	11475	P	D001		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information: DCC: 284351-9 TSD: HCCFBLIQ 1000 21805

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Ryan Dotenbach Inc. — Signature: [signature] — Month 11 Day 17 Year 15

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:

Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MATT RINGGOLD — Signature: [signature] — Month 11 Day 17 Year 15

Transporter 2 Printed/Typed Name: Howard Maxwell — Signature: Howard Maxwell — Month 11 Day 23 Year 15

18. Discrepancy

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number: [illegible]

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H141 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: S. Jabalee — Signature: S. Jabalee — Month 12 Day 07 Year 15

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

...rm designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

...ARDOUS ...ANIFEST	1. Generator ID Number K S 0 0 4 3 [illegible]	2. Page 1 of 2	3. Emergency Response Phone [illegible]	4. Manifest Tracking Number 002983572 GBF

...Name and Mailing Address
[illegible]
[illegible]

Generator's Site Address (if different than mailing address)

...erator's Phone:

...Transporter 1 Company Name
[illegible]
U.S. EPA ID Number [illegible]

...Transporter 2 Company Name
[illegible] 217 222 [illegible]
U.S. EPA ID Number [illegible]

...Designated Facility Name and Site Address
[illegible] Incinerate
[illegible] 8214
U.S. EPA ID Number [illegible]

Facility's Phone: [illegible]

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1. [illegible]							
X	2. UN1987, WASTE ALCOHOLS, N.O.S., 3, PG11, (D001) ERG#127	019	DM	8075	P	D001		
X	3. UN1987, WASTE ALCOHOLS, N.O.S., 3, PG11, (D001) ERG#127	004	DM	1700	P	D001		
X	4. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG11, (DIESEL)(D001, D018) ERG#128	010	DM	4000	P	D001	D018	

14. Special Handling Instructions and Additional Information
[illegible] 1) CC: 284351-9 TSD: HCCFBLIQ 1000 3) CC: 284351-9 TSD: HCCFBLIQ 1000
2) CC: 284351-9 TSD: HCCFBLIQ 1000 4) CC: 284351-22 TSD: HCCFSLNOS 1011

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, [illegible] classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export [illegible] the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrea Jones
Signature: [signature]
Month 11 Day 24 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT RINGGOLD
Signature: [signature]
Month 11 Day 24 Year 15

Transporter 2 Printed/Typed Name: [illegible]
Signature: [illegible]
Month 12 Day 1 Year 15

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. —	2. H141	3. H141	4. H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: J. Jabalee
Signature: [signature]
Month 12 Day 14 Year 15

Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

 DESIGNATED FACILITY TO GENERATOR

KANSAS CITY Route: KANSAS CITY - ROUTE 2 37.55 00-00811TC

Type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 1 / 2
3. Emergency Response Phone: 800-424-9300, "I"
4. Manifest Tracking Number: 002985650 GBF

5. Generator's Name and Mailing Address
GBW RAILCAR SERVICES
PO BOX 436
ATCHISON, KS 66002

Generator's Site Address (if different than mailing address)
GBW RAILCAR SERVICES
15624 256TH RD
CUMMINGS, KS 66016

Generator's Phone: (866)785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: UNITED, INC. — U.S. EPA ID Number: IND984664406

8. Designated Facility Name and Site Address
PETRO-CHEM PROCESSING GROUP
421 Lycaste
Detroit, MI 48214
U.S. EPA ID Number: MID980613298
Facility's Phone: (313)824-5840

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (F003,F005,D001,D007,D008,D035) ERG# 128	003	DM	1600	P	F003 D008	F005 D001	D007 D035
X	2. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PGII, (DIESEL)(D001, D018) ERG #128	003	DM	1275	P	D001	D018	
X	3. UN1987, WASTE ALCOHOLS, N.O.S., 3, PGII, (D001) ERG#127	031	DM	13175	P	D001		
	4.							

14. Special Handling Instructions and Additional Information
1) CC: 284351-11 TSD: HCCSOLIDS 1011 H351
2) CC: 284351-22 TSD: HCCSOLIDS 1011
3) CC: 284351-9 TSD: HCCFBLIQ 1000

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. 24885

Generator's/Offeror's Printed/Typed Name: [illegible] — Signature: [illegible] — Month 12 Day 01 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Matt RINGGOLD — Signature: [signature] — Month 12 Day 01 Year 15
Transporter 2 Printed/Typed Name: Mike Allen — Signature: [signature] — Month 12 Day 3 Year 15

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. H141 3. H141 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a
Printed/Typed Name: S. Jabalee — Signature: [signature] — Month 12 Day 09 Year 15

GENERATOR / INTL / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 2 811TA

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of: 4
3. Emergency Response Phone:
4. Manifest Tracking Number: 002977388 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, P.O. BOX 436, ATCHISON, KS 66002
Generator's Site Address (if different than mailing address): GBW RAILCAR SERVICES, 15624 258TH RD., CUMMINGS, KS 66016
Generator's Phone: 503-937-1538

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, INC.
U.S. EPA ID Number:

7. Transporter 2 Company Name: NEIER
U.S. EPA ID Number: IND984868406

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 Lycaste, Detroit, MI 48214
U.S. EPA ID Number:
Facility's Phone:

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PGII, (DIESEL) (D001, D018) ERG#128	008	DM	3400	P	D001	D018	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1) CC! 284351-22 TSD' HCCSOLIDS 1011
29695

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: X Andrea Jones
Signature: X
Month 12 Day 03 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT RINGGOLD
Signature:
Month 12 Day 03 Year 15
Transporter 2 Printed/Typed Name: Joe McCain
Signature:
Month 12 Day 9 Year 15

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) Manifest Reference Number:
U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: S. Jabalee
Signature: S. Jabalee
Month 12 Day 21 Year 15

GENERATOR / INTL / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

GBW
RAILCAR SERVICES, LLC

GBW Rail Services - Atchison
PO Box 436
Atchison, KS 66002

Hazardous Waste Manifests
KSD043936277
2016

SHIPPING MANIFEST No.	MATERIAL TYPE	WASTE CODES	NUMBER of Containers	POUNDS	TYPE OF Container	DATE SHIPPED	TRANSPORTER	DESTINATION FACILITY
002998558GBF	Waste Flammable Liquid NOS	D001, D018	4	1,800	Drum	1/13/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002998558GBF	Paint Waste	D001,D007, D008,D035,F003,F005	4	2,200	Drum	1/13/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
003002218GBF	Waste Flammable Liquid NOS (Diesel)	D001, D018	13	5,200	Drum	2/10/2016	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002997792GBF	Paint Waste	D001,D007, D008,D035,F003,F005	4	2,000	Drum	1/29/2016	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002977272GBF	Waste Flammable Liquid NOS (Diesel)	D001, D018	15	6,000	Drum	2/23/2016	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874392GBF	Paint Waste	D001,D007, D008,D035,F003,F005	2	1,000	Drum	2/18/2016	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002874392GBF	Waste Flammable Liquid NOS (Diesel)	D001, D018	4	1,400	Drum	2/18/2016	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002977275GBF	Waste Flammable Liquid NOS (Diesel)	D001, D018	10	4,000	Drum	3/3/2016	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002277084GBF	Waste Flammable Liquid NOS	D001, D018	5	2,000	Drum	3/4/2016	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
003085548GBF	Waste Flammable Liquid NOS (Diesel)	D001, D018	7	2,800	Drum	3/10/2016	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002990193GBF	Waste Flammable Liquid NOS (Diesel)	D001, D018	12	4,500	Drum	3/15/2016	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
002990193GBF	Paint Waste	D001,D007, D008,D035,F003,F005	1	450	Drum	3/15/2016	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
003081722GBF	Paint Waste	D001,D007, D008,D035,F003,F005	1	500	Drum	4/6/2016	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
003081722GBF	Waste Flammable Liquid NOS (Diesel)	D001, D018	2	900	Drum	4/6/2016	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
003102119GBF	Paint Waste	D001,D007, D008,D035,F003,F005	1	500	Drum	4/25/2016	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
003102119GBF	Waste Flammable Liquid NOS (Diesel)	D001, D018	2	800	Drum	4/25/2016	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
003103054GBF	Waste Flammable Liquid NOS (Diesel)	D001, D018	3	1,350	Drum	5/5/2015	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group

003112196GBF	Paint Waste	D001,D007, D008,D035,F003,F005	1	450	Drum	6/1/2016	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
003115376GBF	Paint Waste	D001,D007, D008,D035,F003,F005	3	1,500	Drum	7/5/2016	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
003100349GBF	Waste Flammable Liquid NOS (Diesel)	D001, D018	7	2,800	Drum	7/29/2016	Heritage-Crystal Clean,LLC	Petro-Chem Processing Group
003124088666	" "	" "	15	6,000	" "	28/10/16	" "	" "

TOTAL POUNDS	42,150

TOTAL TONS	21

Heavy Crude Oil MSDS

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	Heavy Crude Oil
SYNONYMS:	Sweet Crude
CHEMICAL NAME:	Petroleum
CHEMICAL FAMILY:	Petroleum Hydrocarbon
PRODUCT USE:	Refinery Feedstock
SUPPLIER:	**Grizzly Oil Sands ULC**
Emergency Telephone:	**1-866-687-3592**

2. COMPOSITION/INFORMATION ON INCREDIENTS

Ingredient Name	**%**	**CAS#**	**ACGIH TLV**
Crude Oil	100	8002-05-9	Oil mist (if generated) ACGIH TLV-TWA=5mg/m3 ACGIH TLV-STEL=10mg/m3
Benzene	0.1 to 5	71-43-2	ACGIH TLV-TWA=0.5 ppm (skin) ACGIH TLV-STEL=2.5 ppm
Toluene	0.1 to 5	108-88-3	ACGIH TLV-TWA=20 ppm (skin)
Ethyl benzene	0.1 to 5	100-41-4	ACGIH TLV-TWA=100 ppm ACGIH TLV-STEL=125 ppm
Xylene, mixed isomers	0.1 to 5	1330-20-7	ACGIH TLV-TWA=100 ppm ACGIH TLV-STEL=150 ppm
Hydrogen Sulphide	<0.5	7783-06-4	ACGIH TLV-TWA=10 ppm ACGIH TLV-TWA=15 ppm (skin)

3. HAZARDS INDENTIFICATION

EMERGENCY OVERVIEW
DANGER!!

EXTREMELY FLAMMABLE-MAY EVOLVE TOXIC AND FLAMMABLE HYDROGEN SULPHIDE GAS – EYE, SKIN AND MUCOUS MEMBRANE IRRITANT – EFFECTS CENTRAL NERVOUS SYSTEM – HARMFUL OR FATAL IF SWALLOWED – ASPIRATION HAZARD.

High Fire hazard. Keep Aware from heat, spark, open flame, and other ignition sources.

HYDROGEN SULPHIDE (toxic gas) may be released. High concentration may cause immediate unconsciousness – death may result unless victim is promptly and successfully resuscitated.

Avoid prolonged breathing of vapors or mists. Inhalation may cause irritation, anesthetic effects (dizziness, nausea, headache, intoxication), and respiratory system effects. Contains benzene, which can cause blood disease, including leukemia. Benzene and Toluene is readily absorbed through intact skin

POTENTIAL HEALTH EFFECTS

ROUTE(S) OF ENTRY

Eyes:	Yes	Skin:	Yes	Inhalation:	Yes	Ingestion:	Yes

EYES

MODERATE TO SEVER IRRITANT. Liquids and vapors may cause irritation to the eyes, conjunctiva, and mucous membranes, causing redness and tearing. Splashing of liquid into the eyes will cause smarting and pain.

SKIN

SLIGHT TO MODERATE IRRITANT. Contact may cause irritation to the skin and mucous membranes upon prolonged and/or repeated skin contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are exposed. Prolonged or repeated contact to petroleum oil with skin may cause defatting of the skin leading to redness, itching, inflammation, cracking, dermatitis (rash), and possible secondary infection. High-pressure skin injections are serious medical emergencies. The appearance of injury may be delayed for a few hours, but may cause tissue to become swollen, discolored and extremely painful.

INGESTION

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluids in the lungs), sever lung damage, respiratory failure and even death. Ingestion may cause gastrointestinal disturbances, such as irritation, nausea, vomiting and diarrhea, and central nervous system effects. Acute symptoms of ingestion are most common, including excitation, restlessness, euphoria, nausea, headache, dizziness, drowsiness, blurred vision, reduced coordination, and fatigue. In more severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

INHALATION

Vapors may cause nose and throat irritation, anesthetic effects and central nervous system (CNS) depression. Inhalation may result in nausea, dizziness, drowsiness, headaches, and other symptoms similar to those listed under "Ingestion". Certain ingredients may produce systemic effects to the blood, liver, kidneys, central nervous system and cardiovascular system. Inhalation of high concentrations can case rapid CNS depression, cardiac arrhythmia, unconsciousness, coma, and possibly death resulting from respiratory failure.

WARNING: Irritating and toxic hydrogen sulphide gas may be released. At high concentrations (500 – 1000 ppm), hydrogen sulphide acts as a systemic poison, causing unconsciousness and death. In lower concentrations (50 – 500 ppm), hydrogen sulphide acts as a respiratory irritant, and may cause fluid in the lungs or bronchial pneumonia. The rotten egg odor of hydrogen sulphide is not a reliable indicator for warning of exposure, since olfactory fatigue (loss of smell) readily occurs, especially at concentrations above 50 ppm.

WARNING: The burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

CHRONIC EFFECTS/CARCINOGENICITY

Contains carcinogens according to IARC, NTP, ACGIH and OSHA. Contains benzene; a regulated human carcinogen. Benzene is recognized as having the potential to cause anemia and other blood diseases, including leukemia, after repeated and prolonged exposure.

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MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash) conditions. Chronic respiratory disease, liver or kidney dysfunction, or pre-existing central nervous system disorders may be aggravated by exposure.

4. FIRST AID MEASURES

EYES
In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. hold eyelids open to ensure adequate flushing. Seek medical attention.

SKIN
Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops. High-pressure injections are serious medical emergencies – seek immediate medical attention.

INGESTION
DO NOT INDUCE VOMITING BECAUSE OF DANGER OF BREATHING LIQUID IN TO LUNGS. Seek immediate medical attention. Rinse mouth with water. Administer 1 to 2 glasses of water or milk to drink. Never administer liquids to an unconscious person. If spontaneous vomiting occurs lean victim forward to reduce the risk of aspiration. Seek medical attention. Monitor for breaking difficulty.

INHALATION
Remove person to fresh air. If person is not breaking, ensure an open airway and administer CPR. If necessary, provide additional air or oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASHPOINT:	-20°C to 93.3°C (-4 to 200°F) (Flash point are in the flammable range put are highly dependent on crude oil source. This is a commingled stream of crude oils from various producers.

FIRE AND EXPLOSION HAZARDS
EXTREMELY FLAMMABLE. This is a commingled petroleum stream from various locations and producers. The actual flammable characteristics are difficult to predict but this product should be considered as an extremely flammable liquid. Vapours may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapours can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard. Liquids will float on water. Liquid may accumulate static charge.

EXTINGUISING MEDIA
SMALL FIRES: Any extinguisher suitable for Class B fires – dry chemical, CO_2, water spray, fire foal, or Halon.

LARGE FIRES: Water spray, fog or fire foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

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FIRE FIGHTING INSTRUCTIONS

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Fire fighting activities that may result in potential exposure to high hear, smoke or toxic by-products of combustion should require approved self-contained breathing apparatus (SCBA) with full-facepiece and full protective firefighting clothing.

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. If leak or spill has not ignited, ventilate area and determine if water spray would assist in dispersing gas or vapor to protect personnel attempting to stop leak. Water may be useful in flushing spills away from ignition sources; however, do NOT flush petroleum products down public sewers or other drainage systems.

For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam. Refer to NAERG Guide 128.

6. ACCIDENTAL RELEASE MEASURES

ACTIVATE YOUR FACILITY'S SITE SPECIFIC EMERGENCY RESPONSE PLAN if available.

Evacuate nonessential personnel and remove or secure all ignition sources for 300mm (1000ft). Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of the product travel, diking, sewers, etc. to confirm spill areas. Hydrogen sulphide may be evolved during a release, ensure response personnel are adequately protected – see Section 8 for personal protection

Carefully contain and stop the source of the spill, if safe to do so. Do not flush down sewer or drainage systems. Protect bodies of water by diking, if possible. The use of fire fighting foam may be useful in certain situations to reduce vapors.

SMALL SPILLS: Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Cleanup crews must be properly trained must utilize proper protective equipment.

LARGE SPILLS: Dike far ahead of the spill. The proper use of water spray may affectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection. Consideration should be given to environmental clean-up and waste material generation when determining if the use of large volumes of water is appropriate for non-fire emergency situations. Cleanup crews must be properly trained and must utilize proper protective equipment. Notify regulatory authorities. Refer to NAERF Guide 128.

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7. HANDLING AND STORAGE

HANDLING PRECAUTIONS

Handle as flammable liquid. Keep away from heat, sparks, and open flame. No smoking or open flame in storage, use of handling areas. Keep containers closed and clearly labeled. Ground all drums and transfer vessels when handling. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition. Use only with adequate ventilation. Avoid breaking vapors. Wash thoroughly after handling. Electrical equipment should be approved for classified area. DO NOT siphon by mouth.

STORAGE PRECAUTIONS

Store in a well-ventilated area. This storage area should comply with NFPA 30. Avoid storage near incompatible materials.

WORK/HYGENIC PRACTICES

Emergency eye wash capability should be available in the vicinity of any potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not eat, drink or smoke in areas of use or storage. Do not use gasoline or solvents (naphtha, kerosene, etc.) for washing this product from exposed skin areas. Waterless hand cleansers are effective.

Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Use adequate ventilation to keep vapor and mist concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. Use explosion-proof equipment and lighting in classified/controlled areas.

EYE/FACE PROTECTION

Faceshield or chemical splash goggles are recommended where there is a possibility of splashing or spraying .

SKIN PROTECTION

Avoid repeated or prolonged skin contact. Gloves constructed of a nitrile, neoprene, or PVC are recommended. Chemical protective clothing such as of poly-coated or equivalent recommended based on degree of exposure.

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Note: The resistance of specific materials may vary from product to product as well as degree of exposure. Consult manufacturer specifications for further information.

RESPIRATORY PROTECTION

For hydrogen sulphide hazard (above H_2S permissible exposure limits): SCBA or a supplied air respirator must be used.

If exposure assessment indicates NO reduced oxygen content or hydrogen sulphide hazard (below H_2S exposure limit): NIOSH/MSHA – approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited and should not be considered especially when odor cannot be used to determine respirator effectiveness. Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Refer to CSA Standard "Selection, Use and Care of Respirators" (Z94.4-02) and NIOSH Respirator Decision Logic for additional guidance on respiratory protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

BASIC PHYSICAL PROPERTIES

APPEARANCE

Generally a thick, dark yellow to brown or greenish black liquid.

ODOR

A hydrocarbon odor. If present Hydrogen Sulphide (H_2S) has a rotten egg odor, but should not be used as a warning property of toxic levels because H_2S can overwhelm and deaden the sense of smell. Therefore the smell of H_2S should not be used as an indicator of a hazardous condition – a calibrated H_2S meter can be used to determine the concentration of H_2S.

PHYSICAL STATE:	Liquid
BOILING POINT:	-20 to 1000 °C (-4 to 2012°F)
VAPOR PRESSURE:	varies
VPOR DENSITY (Air = 1):	3 to 5
SPECIFIC GRAVITY:	0.86 to 0.95 (water – 1.0)
SOLUBILITY (H_2O):	Insoluble to slightly soluble
PARTITION COEFFICIENT:	2 to 6

10. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID (STABILITY)

Material is stable under normal conditions. Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.

INCOMPATIBLE MATERIALS

Keep away from strong oxidizers, ignition sources and heat.

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HAZARDOUS DECOMPOSITION PRODUCTS
Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke). Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.

HAZARDOUS POLYMERIZATION: Will Not Occur.

11. TOXICOLOGICAL INFORMATION

ACCUTE EFFECTS
Potential short-term effects of exposure are; irritation eyes, skin, nose, mucous membrane, and respiratory system.

Repeated or prolonged skin exposure to petroleum oils may cause various skin disorders, such as contact or eczematous dermatitis, folliculitis, oil acne, lipid granuloma, melanosis, and rarely precancerous warts on the forearms, backs of hands or scrotum. Contains Benzene and Toluene, which are readily absorbed through intact skin and have Skin Notations by ACGIH.

ACUTE ORAL AFFECTS

Ingredient	CAS No	LD50	LC50
Crude Oil	8002-05-9	Rat oral>5000 mg/kg Dermal Toxicity> 2000 mg/kg	Not available
Toluene	108-88-3	Rat oral 5000 mg/kg Rat oral 3500 mg/kg	400 ppm/4hr
Ethyl Benzene	100-41-4	Rabbit Skin 17,800 mg/kg	Not available
Xylene, missed isomers	1330-20-7	Mouse oral 1590 mg/kg	Rat inhalation: 6350 ppm/4hr
Benzene	71-43-2	Rat oral 3306 mg/kg	Rat ihl 10,000 ppm/7hr Rat inhalation 380 mg/cu m>960
Hydrogen Sulphide	7783-06-4	Not applicable	min

CHRONIC EFFECTS/CARCINOGENICITY
Product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood forming system (particularly bone marrow), and serious blood disorders, such as leukemia. Benzene is listed by the National Toxicology Program (NTP), International Agency For Research on Cancer (IARC), and ACGIH as carcinogenic in humans.

Product contains polynuclear aromatic hydrocarbons (PAHs). Animal studies have shown that prolonged and/or repeated exposure to certain PAHs may cause cancer of the skin, lung and other organs.

Other potential chronic effects of exposure are: irritation eyes, skin, nose, mucous membrane, respiratory system; reproductive pregnancy loss, dizziness, anorexia, vomiting, abdominal pain; dermatitis, excitement, confusion, euphoria, drowsiness, incoordination, staggered gait; corneal vacuolization; anorexia, nausea, vomiting, abdominal pain; dermatitis; lassitude (weakness, exhaustion), headache;

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dilated pupils, lacrimation (discharge of tears); anxiety, muscle fatigue, insomnia; paresthesia; liver, kidney damage, bone marrow depression; [potential occupational carcinogen], narcosis, coma.

Similar products produced skin cancer and skin tumors in laboratory animals following repeated applications. Crude oils may contain some PAH's, which have been shown to be carcinogenic after repeated or prolonged skin contact in laboratory animals. Studies by APO and other have shown that some crude oils produced skin cancer or skin tumors in laboratory animals following repeated applications without washing or removal between applications. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation. Potential risks to humans can be minimized to observing good work practices and personal hygiene procedures.

MUTANGENICITY (GENETIC EFFECTS)
Some crude oils and crude oil fractions have been positive in mutagenic assay tests.

12. ECOLOGICAL INFORMATION

Keep out of sewage, drainage and waterways. Report spills and releases, as applicable, under federal, provincial and local regulations.

13. DISPOSAL CONSIDERATIONS

Maximize product recovery for reuse or recycling. Contaminated materials may be classified as hazardous waste due to the low flash point and benzene. Empty containers can have residues that are subject to hazardous waste disposal requirements. Dispose of waste in accordance with all applicable federal, provincial, and/or local regulations.

14. TRANSPORT INFORMATION

PROPER SHIPPING NAME:	Petroleum Crude Oil
TDG CLASS:	3
TDG IDENTIFICATION NUMBER:	UN1267
TDG SHIPPING LABEL:	Flammable Liquid
SHIPPING DESCRIPTION:	Petroleum Crude Oil, 3, UN1267, PGII

15. REGULATORY INFORMATION

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

Workplace Hazardous Materials Information Systems (WHMIS): This product has been classified in accordance with the hazard criteria of the CPR (Controlled Product Regulations), and the MSDS contains all of the information required by the CPR.
Class B, Division 2 (Flammable Liquid)
D1A – Very Toxic Material Causing Immediate and Serious Toxic Effects
Class D, Division 2, Subdivision A (Very toxic by other means)

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Class D, Division 2, Subdivision B (Toxic by other means)

This substance is listed on the Canadian Domestic Substances List (DSL)

16. OTHER INFORMATION

NFPA HAZARD RATING -	HEALTH:	3	High
	FIRE:	3	High
	REACTIVITY:	0	Negligible

Acronyms:

ANSI	=	American National Standards Institute
ACGIH	=	American Conference of Governmental Industrial Hygienists
API	=	American Petroleum Institute
CSA	=	Canadian Standards Association
HMIS	=	Hazardous Materials Information System
MSHA	=	Mine Safety and Health Administration
NAERG	=	North American Emergency Response Guide
NFPA	=	National Fire Protection Association
NIOSH	=	National Institute of Occupational Safety and Health
NTP	=	National Toxicology Program
OSHA	=	US Occupational Safety & Health Administration
PAH	=	Poly-Aromatic Hydrocarbons
ppm	=	parts per million (volume/volume)
SCBA	=	Self-Contained Breathing Apparatus
STEL	=	Short Term Exposure Limit
TLV	=	Threshold Limit Value
TWA	=	Time Weighted Average
WHMIS	=	Workplace Hazardous Materials Information System – Canadian

Disclaimer of Expressed and Implied Warranties

The information presented in the Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. However, Grizzly Oil Sands ULC nor any of their subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. No responsibility is assumed for any damages or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use.

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Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Peace River Seal Heavy Crude
Synonyms:	Crude Oil Tank Bottoms; Crude Oil; Sour Crude; Sweet Crude; Mineral Oil; Rock Oil; Coal Oil; Heavy Crude Oil.
Product Use:	Refinery feedstock.
Manufacturer/Supplier:	Elbow River Marketing Ltd. Royal Bank Building 1500, 335-8th Avenue SW Calgary, Alberta T2P 1C9
Emergency Phone:	Erap 02-1933-021 1-800-265-0212
Date of Preparation:	October 23, 2013

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER
COMBUSTIBLE LIQUID AND VAPOR. CANCER HAZARD – CAN CAUSE CANCER. IRRITATING TO EYES AND SKIN.

Colour:	Brown to black.
Physical State:	Liquid.
Odour:	Aromatic or sulfide (rotten egg).

WHMIS	Personal Protection Equipment	TDG (Ground)

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Eye contact. Skin contact. Inhalation. Ingestion. Skin absorption.

Inhalation: May cause drowsiness or dizziness. May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Excessive inhalation may cause headache, dizziness, confusion, loss of appetite and/or loss of consciousness. Inhalation of Toluene may result in peculiar skin sensations (e. g. pins and needles) or numbness. This product may contain small amounts of Hydrogen sulphide which may accumulate in confined spaces. Hydrogen sulphide may cause symptoms such as digestive upset and loss of appetite, loss of sense of smell and pulmonary edema. At 500-1000 ppm Hydrogen sulphide may cause respiratory paralysis, collapse and death without rescue.

Eye: Causes eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin: Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Ingestion: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Medical Conditions Aggravated By Exposure: Not available.

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Central nervous system. Lungs. Blood. Cardiovascular system. Bone marrow. Liver. Reproductive system. Nervous system.

Potential Environmental Effects: See Section 12 for more information.

This material is considered hazardous by the OSHA Hazard Communication Standard, (29 CFR 1910.1200).

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	CAS No.	% wt./wt.
Petroleum	8002-05-9	100

Section 4: FIRST AID MEASURES

Inhalation: If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell. If breathing or the heart stops, trained personnel should immediately begin artificial respiration (AR) or cardiopulmonary resuscitation (CPR) respectively. Get medical attention immediately.

Eye Contact: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact: If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

Ingestion: If swallowed: Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If breathing or the heart stops, trained personnel should immediately begin artificial respiration (AR) or cardiopulmonary resuscitation (CPR) respectively. Get medical attention immediately.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).

Note to Physicians: Symptoms may not appear immediately. For inhalation of Hydrogen Sulphide, consider oxygen.

Section 5: FIRE FIGHTING MEASURES

Flammability: Combustible liquid by WHMIS criteria. Class IIIA combustible liquid by OSHA criteria. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer

may create fire or explosion hazard. Containers may explode when heated. Many liquids are lighter than water. When heated, this material may evolve toxic and flammable Hydrogen sulphide.

If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

Fire involving Tanks or Car/Trailer Loads: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

Means of Extinction

Suitable Extinguishing Media:	Small Fire: Dry chemical, CO2, water spray or regular foam. Large Fire: Water spray, fog or regular foam. Move containers from fire area if you can do it without risk.
Unsuitable Extinguishing Media:	Do not use straight streams.
Products of Combustion:	Oxides of carbon. Oxides of sulphur. Aldehydes.
Protection of Firefighters:	Inhalation or contact with material may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation. Runoff from fire control or dilution water may cause pollution. Hydrogen sulphide is heavier than air and may collect in low lying areas and confined spaces. Wear positive pressure self- contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Explosion Data

Sensitivity to Mechanical Impact:	This material is not sensitive to mechanical impact.
Sensitivity to Static Discharge:	This material is sensitive to static discharge.

Section 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures:	As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded.
Personal Precautions:	Do not touch or walk through spilled material. Use personal protection recommended in Section 8.Don full-face, positive pressure, self-contained breathing apparatus.
Environmental Precautions:	Prevent entry into waterways, sewers, basements or confined areas.

Methods for Containment: Stop leak if you can do it without risk. A vapor suppressing foam may be used to reduce vapors.

Methods for Clean-Up: Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material.

Other Information: See Section 13 for disposal considerations.

Section 7: HANDLING AND STORAGE

Handling:
Do not breathe mist, vapors, or spray. Do not swallow. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flames, and hot surfaces. – No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Harmful concentrations of hydrogen sulfide (H2S) gas can accumulate in excavations and low-lying areas as well as the vapour space of storage and bulk transport compartments. See Section 8 for information on Personal Protective Equipment.

Storage:
Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children. Head spaces in storage containers may contain toxic hydrogen sulphide gas. Structural materials and lighting and ventilation systems should be corrosion resistant.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines
Component

Petroleum [CAS No. 8002-05-9]
ACGIH: A2; Exposure by all routes should be carefully controlled to levels as low as possible (2009); For Mineral oil, excluding metal working fluids; Poorly and mildly refined
OSHA: 500 ppm (TWA), 2000 mg/m³ (TWA);
400 ppm (TWA) [Vacated];

Hexane [CAS No. 110-54-3]
ACGIH: 50 ppm (TWA); Skin, BEI (1996)
OSHA: 500 ppm (TWA), 1800 mg/m³ (TWA); Skin.
50 ppm (TWA) [Vacated];

Toluene [CAS No. 108-88-3]
ACGIH: 20 ppm (TWA); A4; BEI (2006)
OSHA: 200 ppm (TWA); 300 ppm (C); 500 ppm (Peak) (Maximum duration: 10 minutes.)
100 ppm (TWA); 150 ppm (STEL) [Vacated];

Xylene [CAS No. 1330-20-7]

ACGIH: 100 ppm (TWA); 150 ppm (STEL); A4; BEI (1992)
OSHA: 100 ppm (TWA), 435 mg/m³ (TWA);
150 ppm (STEL) [Vacated];

Benzene [CAS No. 71-43-2]

ACGIH: 0.5 ppm (TWA); 2.5 ppm (STEL); Skin; A1; BEI (1996)
OSHA: 1 ppm (TWA); 5 ppm (STEL);

Hydrogen sulphide [CAS No. 7783-06-4]

ACGIH: 1 ppm (TWA); 5 ppm (STEL); (2009);
OSHA: 20 ppm (C); 50 ppm (Peak) (Maximum duration: 10 mins. once only if no other meas. exp. occurs.)
10 ppm (TWA); 15 ppm (STEL) [Vacated];

Polycyclic aromatic hydrocarbons [CAS No. 130498-29-2]

ACGIH: A2; BEI; Exposure by all routes should be carefully controlled to levels as low as possible (1990); For Benz[a]anthracene
OSHA: 0.2 mg/m³ (TWA); For benzene-soluble fraction.

TWA: Time-Weighted Average
STEL: Short-Term Exposure Limit
C: Ceiling

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, gas, etc.) below recommended exposure limits. Use explosion-proof electrical, ventilating, and lighting equipment.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Eye/Face Protection: Wear safety goggles. Ensure that eyewash stations are close to the workstation location. Use equipment for eye protection that meets the standards referenced by OSHA regulations in 29 CFR 1910.133 for Personal Protective Equipment.

Hand Protection: Wear protective gloves. Consult manufacturer specifications for further information.

Skin and Body Protection: Wear protective clothing. Flame resistant clothing that meets the NFPA 2112 and CAN/CGSB 155.20 standards is recommended in areas where material is stored or handled.

Respiratory Protection: If engineering controls and ventilation are not sufficient to control exposure to below the allowable limits then an appropriate NIOSH/MSHA approved air-purifying respirator with organic vapor cartridge, or self-contained breathing apparatus must be used. Supplied air breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying

respirators.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Brown to black liquid.
Colour:	Brown to black.
Odour:	Aromatic or sulfide (rotten egg).
Odour Threshold:	Not available.
Physical State:	Liquid.
pH:	Not available.
Viscosity:	2400 to 2600 mm^2/s at 30 °C (86 °F)
Melting Point:	Not available.
Boiling Point:	> 120 °C (248 °F)
Flash Point:	24 to 50 °C (75.2 to 122 °F)
Evaporation Rate:	Variable.
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Specific Gravity:	0.9 to 1 (Water = 1) at 15°C (59 °F)
Density:	900 to 1000 kg/m^3 at 15°C (59 °F)
Solubility in Water:	Insoluble in water.
Coefficient of Water/Oil Distribution:	Not available.
Auto-ignition Temperature:	Not available.
Percent Volatile, wt. %:	100
VOC content, wt. %:	Not available.

Section 10: STABILITY AND REACTIVITY

Stability:	Stable under normal storage conditions.
Conditions of Reactivity:	Contact with incompatible materials. Exposure to heat.
Incompatible Materials:	Strong acids. Strong oxidizers. Halogens.

Hazardous Decomposition Products: Hazardous sulphur dioxide, and related oxides of sulphur may be generated upon combustion.

Possibility of Hazardous Reactions: None known.

Section 11: TOXICOLOGICAL INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Toxicity

Component	CAS No.	LD_{50} oral	LD_{50} dermal	LC_{50}
Petroleum	8002-05-9	4300 mg/kg (rat)	Not available.	Not available.
Hexane	110-54-3	25000 mg/kg (rat)	Not available.	48000 ppm (rat); 4H
Toluene	108-88-3	600 mg/kg (rat)	14.1 mL/kg (rabbit)	49000 mg/m³ (rat); 4H
Xylene	1330-20-7	> 1700 mg/kg (rat)	4300 mg/kg (rabbit)	5000 ppm (rat); 4H
Benzene	71-43-2	930 mg/kg (rat)	> 9400 µl/kg (rabbit)	10000 ppm (rat); 7H
Hydrogen sulphide	7783-06-4	Not available.	Not available.	444 ppm (rat); 4H
Polycyclic aromatic hydrocarbons	130498-29-2	Not available.	Not available.	Not available.

Inhalation: May cause drowsiness or dizziness. May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Excessive inhalation may cause headache, dizziness, confusion, loss of appetite and/or loss of consciousness. Inhalation of Toluene may result in peculiar skin sensations (e. g. pins and needles) or numbness. This product may contain small amounts of Hydrogen sulphide which may accumulate in confined spaces. Hydrogen sulphide may cause symptoms such as digestive upset and loss of appetite, loss of sense of smell and pulmonary edema. At 500-1000 ppm Hydrogen sulphide may cause respiratory paralysis, collapse and death without rescue.

Eye: Causes eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin: Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Ingestion: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Skin Sensitization: Not available.

Respiratory Sensitization: Not available.

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Lungs. Blood. Cardiovascular system. Bone marrow. Liver. Kidneys. Reproductive system. Nervous system.

Chronic Effects: Hazardous by OSHA/WHMIS criteria. May cause chronic effects. Prolonged or repeated contact may dry skin and cause irritation. High vapour concentrations, generally greater than 10% by volume, may sensitize the heart and lead to lethal cardiac arrhythmias. Repeated dermal application of crude oils in rats produced systemic toxicity in blood, liver, thymus and bone marrow. Chronic inhalation of n-Hexane may cause peripheral nerve disorders and central nervous system effects. Reports of chronic poisoning with Benzene, Toluene or Xylene describe anemia, decreased blood cell count and bone marrow hypoplasia. Liver and kidney damage may occur. Repeated exposure of the eyes to high concentrations of Xylenes vapour may cause reversible eye damage. Chronic inhalation exposure to xylene causes mid-frequency hearing loss in laboratory animals. Xylene reacts synergistically with n-hexane to enhance hearing loss. Hydrogen sulphide may reduce lung function; cause neurological effects such as headaches, nausea, depression and personality changes; eye and mucous membrane irritation: damage to cardiovascular system. This product contains Polycyclic aromatic hydrocarbons. Prolonged contact with these compounds has been associated with the induction of skin and lung tumours, anemia, disorders of the liver, bone marrow and lymphoid tissues.

Carcinogenicity: May cause cancer. Lifetime skin painting studies in animals with whole crude oils and crude oil fractions have produced tumours in animals following prolonged and repeated skin contact. Chronic exposure to benzene has been associated with an increased incidence of leukemia and multiple myeloma (tumour composed of cells of the type normally found in the bone marrow).

Component Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Prop 65
Petroleum	A2	Group 3	List 1	OSHA Carcinogen.	Listed.
Toluene	A4	Group 3	Not listed.	Not listed.	Not listed.
Xylene	A4	Group 3	Not listed.	Not listed.	Not listed.
Benzene	A1	Group 1	List 1	OSHA Carcinogen.	Listed.
Polycyclic aromatic hydrocarbons	A2	Not listed.	List 2	OSHA Carcinogen.	Listed.

Mutagenicity: May cause heritable genetic damage.

Reproductive Effects: Studies exist which report a link to crude oil and reproductive effects including menstrual disorders.

Developmental Effects
Teratogenicity: Not available.

Embryotoxicity: Possible risk of harm to the unborn child. Repeated dermal application of crude oils to pregnant rats produced maternal toxicity and fetal developmental toxicity and fetal tumours. Exposure to Toluene may affect the developing fetus. Benzene and Xylene have caused adverse fetal effects in laboratory animals.

Toxicologically Synergistic Materials: Xylene reacts synergistically with n-hexane to enhance hearing loss.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Petroleum: 21 and 41 mg/l, 96 hr., Rainbow trout;

Petroleum: 2.7 and 4.1 mg/l, 96 hr., Mysid;

Petroleum: 122 and 528 ml/kg, 96 hr., Algae.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions: Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

Section 14: TRANSPORT INFORMATION

U.S. Department of Transportation (DOT)

Proper Shipping Name: UN1267, PETROLEUM CRUDE OIL, 3, PG III

Class: 3

UN Number: UN1267

Packing Group: III

Canada Transportation of Dangerous Goods (TDG)

Proper Shipping Name: UN1267, PETROLEUM CRUDE OIL, 3, PG III

Class: 3

UN Number: UN1267

Packing Group: III

Section 15: REGULATORY INFORMATION

Chemical Inventories

US (TSCA)
The components of this product are in compliance with the chemical notification requirements of TSCA.

Canada (DSL)
The components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

Federal Regulations

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Classification:
Class B3 - Combustible Liquids.
Class D2A - Carcinogenicity.
Class D2A - Embryotoxicity.
Class D2A - Mutagenicity.
Class D2A - Chronic toxic effects.
Class D2B - Skin irritant.
Class D2B - Eye irritant.

Hazard Symbols:

United States
This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SARA Title III

Component	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313	RCRA CODE	CAA 112(r) TQ (lbs.)
Hexane	Not listed.	Not listed.	5000	313	Not listed.	Not listed.
Toluene	Not listed.	Not listed.	1000	313	U220	Not listed.
Xylene	Not listed.	Not listed.	100	313	U239	Not listed.
Benzene	Not listed.	Not listed.	10	313	U019	Not listed.
Hydrogen sulphide	500	100	100	313s	U135	10000
Polycyclic aromatic hydrocarbons	Not listed.	Not listed.	Not listed.	313^	Not listed.	Not listed.

State Regulations
Massachusetts
US Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

Component	CAS No.	RTK List
Petroleum	8002-05-9	Listed.
Hexane	110-54-3	Listed.
Toluene	108-88-3	Listed.
Xylene	1330-20-7	Listed.
Benzene	71-43-2	E
Hydrogen sulphide	7783-06-4	E
Polycyclic aromatic hydrocarbons	130498-29-2	Listed.

Note: E = Extraordinarily Hazardous Substance

New Jersey
US New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

Component	CAS No.	RTK List
Petroleum	8002-05-9	SHHS
Hexane	110-54-3	SHHS
Toluene	108-88-3	SHHS
Xylene	1330-20-7	SHHS
Benzene	71-43-2	SHHS
Hydrogen sulphide	7783-06-4	SHHS

Note: SHHS = Special Health Hazard Substance

Pennsylvania
US Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

Component	CAS No.	RTK List
Petroleum	8002-05-9	Listed.
Hexane	110-54-3	Listed.
Toluene	108-88-3	E
Xylene	1330-20-7	E
Benzene	71-43-2	ES
Hydrogen sulphide	7783-06-4	E
Polycyclic aromatic hydrocarbons	130498-29-2	Listed.

Note: E = Environmental Hazard; S = Special Hazardous Substance

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

Component	Type of Toxicity
Petroleum	cancer
Toluene	developmental; female
Benzene	cancer; developmental, male
Polycyclic aromatic hydrocarbons	cancer

Section 16: OTHER INFORMATION

Disclaimer: The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for his own particular use.

MSDS Expiry Date (Canada):	October 22, 2016
Version:	1.0
MSDS Prepared by:	**Deerfoot Consulting Inc.**
	Phone: (403) 720-3700

Heartland Energy Group LTD.
Grain Valley, MO 64029
Melbourne, FL 32904
Norfolk, VA 23504
San Antonio, TX 78264
Victoria, Mahé-Seychelles
1-877-797-2811

SAFETY DATA SHEET

SECTION I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product: NanoDissolve® Gel
General Description: Reliquefication Compound
Revision Date: 4/24/15
REACH Registration: The component in this product has been Registered according to Article 2 REACH Regulation (EC) No. 1907/2008

HMIS Rating	
Health	1
Fire	1
Reactivity	0
Personal Protection	A

Rating Scale
4 = Extreme
3 = High
2 = Moderate
1 = Slight
0 = Insignificant

For General Information call: 1-877-797-2811

For Chemical Emergency ONLY (spill, leak, fire, exposure or accident), call CHEMTREC at 1-800-424-9300

SECTION II. HAZARD IDENTIFICATION

CLASSIFICATION OF SUBSTANCE OR MIXTURE
Product definition: Mixture

Classification per Regulation (EC) No 1272/2008 [CLP]: Not classified

LABEL ELEMENTS
Labeling per Regulation (EC) No 1272/2008 [CLP]
Hazard Symbols: Non allocated
Signal Word: Non allocated
Hazard Statement(s): Non allocated

SECTION III. COMPOSITION/INFORMATION ON INGREDIENTS

CAS#	Chemical Formula
N/A	Proprietary/Trade Secret Claimed

Substances
The identity of this material is a trade secret (29 CFR 1910.1200(i)) and is available to any attending physician, paramedical personnel and/or spill response personnel in the case of an emergency. Proprietary ingredient is non-toxic.
There are no additional ingredients present which, within the current knowledge of the manufacturer and in the concentrations applicable, classified as hazardous to the health or environment thus do not require reporting in this section.

Mixtures
Not applicable

SECTION IV. FIRST-AID MEASURES

EMERGENCY OVERVIEW

Potential Health Effects
Inhalation: Can enter to lungs and cause damage. Excessive or prolonged breathing of this material may cause central nervous

system side effects. Central nervous system side effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness or confusion.

Eye: May cause eye irritation; not expected to cause prolonged or significant eye irritation.
Skin: May cause skin irritation. Prolonged skin contact may cause drying or de-fatting of skin. Not expected to be harmful to organs if absorbed through skin. Contact with skin is not expected to cause allergic response.
Ingestion: Harmful or fatal if swallowed. Because of its low viscosity, this material can directly enter the lungs, if swallowed, or subsequently vomited. Once in lungs, it is very difficult to remove and can cause injury and death.
Chronic: No information found.

FIRST AID MEASURES

INHALATION: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYES: Flush with water for at least 15 minutes while holding eyelids open. Call a physician if irritation persists. If worn, remove contacts after first 5 minutes.

SKIN: Remove contaminated clothing. Wash exposed area with soap and water for at least 15 minutes. Launder clothes before reuse. Call a physician if rash or other symptoms develop.

INGESTION: If ingested, do not induce vomiting. Drink plenty (2-3 glasses) of water or milk and immediately get medical attention. Never give anything by mouth to an unconscious person.

SECTION V. FIRE-FIGHTING MEASURES

Flash Point: > 203°F
Auto Ignition Temperature: Lowest known >400°F
Flammability Limits: Lower: >.6; Upper: >5.4
Extinguishing Media: Treat as oil fire. CO_2, dry chemical, foam. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including a self-contained breathing apparatus.
Unusual Fire And Explosion Hazards: Rags soaked with any solvent present a fire hazard and should always be stored UL listed and covered containers. Improperly stored rags can create conditions that lead to oxidation. Oxidation, under certain conditions can lead to spontaneous combustion. This product contains antioxidants to retard oxidation.

SECTION VI. ACCIDENTAL RELEASE MEASURES

Personal precautions Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods for containment: Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up: Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labeled containers. Prevent large spills from entering sewers or waterways. Never return spills in original containers for re-use. Eliminate all sources of ignition from the affected areas.

SECTION VII. HANDLING AND STORAGE

General Handling and Storage Precautions: As with all chemical products and material, take care as to where and how you store them.

Shelf Life: No known limit. Recommended: Use within 1 year.

Special Sensitivity: None

Storage and other Precautions: Keep container closed. Do not store near heat, sparks or open flames. Use or store in a well-ventilated area. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity or other sources of ignition. Empty drums should be completely drained, properly bunged and promptly returned to a drum re-conditioner, or properly disposed of.

SECTION VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Under normal conditions a respirator is not required. In confined or poorly ventilated areas wear a NIOSH approved respirator if exposure of harmful levels of airborne material may occur. Use the following elements for air purifying respirators: Organic Vapor

Ventilation: Use product in a well-ventilated area. If operator generates airborne material, use process enclosures, local exhaust ventilation or engineering controls to control exposure.

Skin: Protective clothing is suggested when working with any chemical. Selection of protective clothing may include gloves, apron, boots and facial protection depending on the operation being conducted.

Eye Protection: Safety glasses and/or goggles are always recommended to minimize risk to an employee's eyes.

SECTION IX. PHYSICAL AND CHEMICAL PROPERTIES

Properties Evaluated @ Ambient Temperature		**Initial Freeze Point:**	0°F (-18°C)
Appearance:	Clear yellowish gelled liquid	**Initial Boiling Point:**	>400°F (177°C)
Odor:	Faint hydrocarbon odor	**Flash Point:**	>203°F (95°C)
Specific Gravity:	.78 ± 0.04	**Solubility:**	Not Soluble

Other data: These physical properties are typical values for this product and not specifications. No other data available.

SECTION X. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and operating pressures.
Conditions to Avoid: No data available
Incompatibilities with Other Materials: May react with strong acids or strong oxidizing agents.
Hazardous Polymerization: Will not occur.

SECTION XI. TOXICOLOGICAL INFORMATION

LD50:
Oral, rat: LD50 = No information available.
Carcinogenicity:
Not listed by ACGIH, IARC, NTP, or CA Prop 65.
Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: No information available.
Mutagenicity: No information available.
Neurotoxicity: No information available.
Other Studies: N/A

SECTION XII. ECOLOGICAL INFORMATION

Ecological Studies:
Please call the non-emergency telephone number if this information is required.

SECTION XIII. DISPOSAL CONSIDERATIONS

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

SECTION XIV. TRANSPORT INFORMATION

This material is not regulated for transport. **Marine Pollutant:** This product is not a marine pollutant.

The proper shipping name and/or hazard class for this product may vary according to packaging, properties and mode of transportation. Customer is urged to consult 49 CFR 100-177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods. Typical proper shipping names for this product are:

US Department of Transportation (DOT): Non-Regulated as a Hazardous Material
Canadian TDG (Transportation of Dangerous Goods): Not Regulated as a Hazardous Material
IMO (Water Transportation): Not Regulated as a Hazardous Material
IATA (Air Transportation): Not Regulated as a Hazardous Material
Rail: Not Evaluated

SECTION XV. REGULATORY INFORMATION

US FEDERAL
TSCA
All components of this product are listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
Section 313 No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
This chemical is not present on state lists from CA, PA, MN, MA, FL, or NJ.
California Prop 65
California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations
European Labeling in Accordance with EC Directives

European Economic Community
Classification per Directive 67/548/EEC or 1999/45/EC
Not Classified
Risk Phrases: None allocated
Safety Phrases: S2-Keep out of reach of children
S24/25 Avoid contact with skin and eyes
WGK, Germany (Water danger/protection): No data available

Canada - DSL/NDSL
This product is listed on Canada's DSL List.
Canada - WHMIS
WHMIS: Not available.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
Canadian Ingredient Disclosure List

SECTION XVI. OTHER INFORMATION

The information accumulated herein is believed to be accurate based on the information provided, although no guarantee or warranty, either expressed or implied is made as to the accuracy or completeness of this information, whether originating with this company or not. Recipients are advised to confirm in advance of need that the information is correct, applicable and suitable to their circumstances. The conditions or methods of handling, storage, use and disposal of the product and container are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage or use of this information or product. If the product is used as a component in another product, this information may not be applicable.

Green Plains

GHS SAFETY DATA SHEET

DENATURED ETHANOL

SDS DATE: 12/15/2014

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME (GHS Product Identifier): Denatured Ethanol
(Other means of Identification): Denatured Ethyl Alcohol

PRODUCT INTENDED USE AND RESTRICTION: Automobile fuel, fuel additive

MANUFACTURER: Green Plains, Inc.
DIVISION:

Green Plains Atkinson LLC. 87590 Hill Crest Rd. Atkinson, NE 68713 P.O. Box 391, Atkinson, NE 68713 Phone: 402-925-5570 Fax: 402-925-2988	**Green Plains Bluffton LLC.** 1441 S. Adams St., Bluffton, IN 46714 Phone: 260-353-1212 Fax: 260-353-1100	**Green Plains Central City LLC.** 214 20th St., Central City, NE 68826 Phone: 308-946-9700 Fax: 308-946-2623	**Green Plains Fairmont LLC.** 1125 N Bixby Road, Fairmont, MN 56031 Phone: 507-238-3600 Fax: 507-238-3624	**Green Plains Holdings II LLC.-Lakota** 1660 428th St., Lakota, IA 50451 Phone: 515-886-2222 Fax: 515-886-2127
☑	☑	☑	☑	☑
Green Plains Holdings II LLC.-Riga 7025 Siberhorn Hwy, Blissfield, MI 49228 P.O. Box 12, Riga, MI 49276 Phone: 517-486-6190 Fax: 517-486-6192	**Green Plains Obion LLC.** 2098 McDonald Rd., Rives, TN 38253/P.O. Box 95, Obion, TN 38240 Phone: 731-536-1286 Fax: 731-536-1434	**Green Plains Ord LLC.** 48267 Val-E Road, Ord, NE 68862 Phone: 308-496-4823 Fax: 308-496-4890	**Green Plains Otter Tail LLC.** 24096 170th Ave., Fergus Falls, MN 56537 Phone: 218-998-4301 Fax: 218-998-4302	**Green Plains Shenandoah LLC.** 4124 Airport Rd., Shenandoah, IA 51601 Phone: 712-246-2932 Fax: 712-246-3988
☑	☑	☑	☑	☑
Green Plains Superior LLC. 1495 320th Ave, Superior, IA 51363 Phone: 712-858-4666 Fax: 712-858-4684	**Green Plains Wood River LLC.** 7874 South 140th Road, Wood River, NE 68883 Phone: 308-385-1200 Fax: 308-385-9990	**Green Plains Grain Company LLC. Essex** 411 North Street, Essex, IA 51638 Phone: 712-379-3155 Fax: 712-379-3175	**Green Plains Grain Company LLC. Hopkins** 200 N. Railroad Hopkins, MO 64461 Phone: 660-778-3331 Fax: 660-778-3676	**Green Plains Grain Company LLC. St Ed** 401 Railroad Avenue St. Edward, NE 68660 Phone: 402-678-2442 Fax: 402-678-3495
☑	☑	☐	☐	☐

CHEMTREC PHONE (24HR Emergency Telephone): 1-800-424-9300 (Within U.S.A)
INTERNATIONAL CHEMTREC CALL: 1-703-527-3887
OTHER CALLS: 1-402-884-8700 (M-F, 8 AM-5 PM, Central time (U.S.A & Canada); within U.S.A)

FAX PHONE: 1-402-884-8776 (M-F, 8 AM-5 PM, Central time (U.S.A & Canada); within U.S.A)

SECTION 1 NOTES: None Available

SECTION 2: HAZARDS IDENTIFICATION

GHS LABELING AND CLASSIFICATION: This product meets the definition of the following hazard classes as defined by the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

GHS CLASSIFICATION ACCORDING TO ANNEX II:

HEALTH	ENVIRONMENTAL	PHYSICAL
Serious eye damage/eye irritation-2A Skin corrosion/irration-3 STOT SE-2 Acute toxicity (Oral)-Category 4	Not classified	Flammable Liquids-Category 2

SIGNAL WORD:	**DANGER**
SYMBOL:	

HAZARD STATEMENT:		H225: Highly flammable liquid and vapor. H319: Causes serious eye irritation. H315: Causes skin irritation. H335: May cause respiratory irritation H336: May cause drowsiness or dizziness H302: Harmful if swallowed.
PRECAUTIONARY STATEMENTS:	**PREVENTIVE:**	P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood P210-Keep away from heat/sparks/open flames/hot surfaces.—No smoking. P241: Use explosion-proof electrical/ventilating/light/…/equipment. P242: Use only non-sparking tools. P243: Take precautionary measures against static discharge. P264: Wash hands thoroughly after handling. P261: Avoid breathing fume/gas/mist/vapors/spray. P270: Do not eat, drink or smoke when using this product.
	RESPONSE:	P370+380+376+378: In case of fire: Evacuate area, stop leak if safe to do so, use proper fire-extinguishers (e.g. alcohol-resistant foam, dry powder, CO2) for extinction P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+313: If eye irritation persists, get medical advice/attention P303+361+353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+312: IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell. P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor/… P308+P313: IF exposed or concerned: Get medical advice/attention
	STORAGE:	P403+235: Store in a well ventilated place. Keep cool. P405: Store locked up. P410: Protect from sunlight.
	DISPOSAL:	P501: Dispose of contents/container to relevant local and national regulations.

Any Regional Considerations: N/A

SECTION 2 NOTES: Vapor/air mixtures are explosive

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

	Ethanol CAS#: 64-17-5	Gasoline CAS#: 8006-61-9	Benzene CAS#:71-43-2
CHEMICAL NAME	Ethyl alcohol	Gasoline	Benzene
COMMON NAME	Ethanol	Gasoline	Benzene
CHEMICAL FAMILY	Alcohols	Petroleum hydrocarbon	Aromatic hydrocarbon
CHEMICAL FORMULA	C_2H_6O	N/A	C_6H_6
SYNONYMS	Alcohol, absolute ethanol	Lead-free gasoline, natural gasoline	Annulene, Benzeen, Benzol

INGREDIENT: Ethanol; natural gasoline; gasoline; benzene

NAME	CAS#	EC#	ICSC#	% WT	% VOL
Ethanol	64-17-5	200-578-6	0044	95-98%	N/A
Natural Gasoline	8006-61-9	232-349-1	N/A	2-5%	N/A
Gasoline	86290-81-5	289-220-8	1400	2-5%	N/A
Benzene	71-43-2	200-753-7	0015	<0.1%	N/A

CARCINOGENICITY

OSHA: NOT APPLICABLE **ACGIH:** NOT APPLICABLE **NTP:** NOT APPLICABLE **IARC:** NOT APPLICABLE
OTHER: Natural gasoline: Possible Carcinogen (2B) listed by IARC; Benzene: Carcinogen (1) listed by IARC; Ethanol: ACGIH TLV-A3

IMPURITIES/STABILIZING ADDITIVES IDENTIFICATION: N/A

IMPURITIES/STABILIZING ADDITIVES CLASSIFICATION (if applicable): N/A

SECTION 3 NOTES: None Available

SECTION 4: FIRST AID MEASURES

Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to health professional with contaminated individual.

EMERGENCY OVERVIEW: Flammable liquid and vapor. Contains material that can cause target organ damage; Possible cancer hazard – contains material which may cause cancer, based on animal data. Do not ingest. Avoid prolonged contact with eyes, skin and clothing. Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Risk of cancer depends on duration and level of exposure.
Danger! Contains Benzene; Cancer Hazard. Can cause kidney, liver and blood disorders; May cause irritation to eyes, skin and respiratory system. Avoid liquid, mist and vapor contact. Harmful or fatal if swallowed. Aspiration hazard; can enter lungs and cause damage. May cause irritation or be harmful if inhaled or absorbed through the skin. Extremely flammable liquid; Vapors may explode.

ROUTES OF ENTRY/FIRST AID:

EYES CONTACT: Flush with water for minimum of 15 minutes

SKIN CONTACT: Flush with water for minimum of 15 minutes

INHALATION: Remove victim to fresh air

INGESTION: This product may be harmful or fatal if swallowed. DO NOT induce vomiting. Drink water to dilute

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Any pre-existing disorders of the nervous system, liver, respiratory system, skin, eyes and gastrointestinal tract may be aggravated by exposure

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 4 NOTES: None Available

SECTION 5: FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: For small fire, use dry chemicals, CO_2, water spray or alcohol resistant foam; For large fire, use water spray, water fog or alcohol resistant foam

PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS: Wear an approved positive pressure, self-contained breathing apparatus and firefighter gear. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers by flooding with water until fire is completely extinguished. Always stay away from tanks engulfed in flames

UNUSUAL FIRE AND EXPLOSION HAZARDS:
(*Define specific hazards arising from the chemical e.g., nature of any hazardous combustion products*)
Ethanol vapors may travel a considerable distance to a source of ignition and flash back. Alcohols burn with a pale blue flame, which may only be able to feel the heat of the flame without seeing the fire

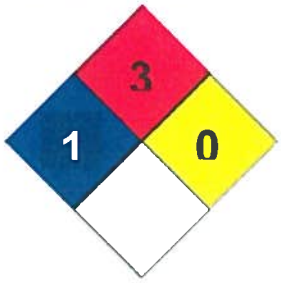
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, aldehydes, and ketones

FLAMMABLE LIMITS IN AIR (% by volume):
UPPER LIMIT: 19.0%
LOWER LIMIT: 3.3%

FLASH POINT:
F: -55.0°F (Ethanol; Closed Cup); -45.0°F (Denaturant; est.)
C: -48.3°C (Ethanol; Closed Cup); -42.8°C (Denaturant; est.)
METHOD USED:

AUTOIGNITION TEMPERATURE:
F: 689.0°F
C: 365.0°C

NFPA HAZARD CLASSIFICATION:



HEALTH=1
FLAMMABILITY=3
REACTIVITY=0
OTHER=N/A

HMIS HAZARD CLASSIFICATION (0-4 scale):

Ethanol, 200 proof	
HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZARD	0
PERSONAL PROTECTION	H
Splash goggles, gloves, chemical apron, vapor respirator	

SECTION 5 NOTES: None Available

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: In case of a large spill, wear splash googles, full suit, vapor respirator, boots, gloves. A self contained breathing apparatus should be used to avoid inhalation of the product.

ENVIRONMENTAL PRECAUTIONS: Keep run-offs out of municipal sewers and open bodies of water. Comply with local, state and national laws and regulations

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: For small spills, may be flushed with large amounts of water; for large spills, eliminate all sources of ignition. Stop leak if without risk. Use water spray or alcohol resistant foam to reduce vapors. Prevent entry into confined spaces. Prevent entry of material into waterways. Depending on size and nature of release, local, state and federal authorities may need to be notified.

SECTION 6 NOTES: None Available

SECTION 7: HANDLING AND STORAGE

PRECAUTION FOR SAFE HANDLING: Wear personal protective equipment. Ensure adequate ventilation. Use explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing.

CONDITIONS FOR SAFE STORAGE (any incompatibilities): Metal containers should be grounded and bonded. Protect container against physical damage. Detached or outside storage is preferred. Inside storage should be in an NFPA approved flammable liquids storage room or cabinet. All ignition sources should be eliminated. NFPA 30, flammable and combustible liquids code, should be followed for all storage and handling. Consult local fire codes for additional storage information

SECTION 7 NOTES: None Available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS/GUIDELINES:

INGREDIENTS	ACGIH	NIOSH	OSHA-FINAL PELs
Ethanol	1000 ppm TWA	1000 ppm TWA; 1900 mg/m^3 TWA; 3300 ppm IDLH	1000 ppm OSHA-TWA; 1900 mg/m^3 TWA
Natural Gasoline	300 ppm ACGIH TLV/TWA	N/A	N/A
Gasoline	300 ppm ACGIH TLV/TWA	300 ppm TWA; 500 ppm STEL	300 ppm OSHA-TWA; 500 ppm STEL
Benzene (constituent of gasoline)	10 ppm ACGIH TLV/TWA	Ca 0.1 ppm TWA; 1 ppm STEL; Ca 500 ppm IDLH	1 ppm OSHA PEL/TWA

ENGINEERING CONTROLS: Controls should be used whenever feasible to maintain concentrations below acceptable exposure limits including but not limited to enclosures, local ventilation and dilution ventilation. When transferring contents the metallic container must be bonded and the receiving container must be grounded to prevent static discharges. Ensure eyewash stations are available.

VENTILATION: Handle material in properly ventilated areas only

PERSONAL PROTECTIVE EQUIPMENT (PPE):

EYE PROTECTION: Wear safety glasses as a minimum eye protection. Conditions may warrant the use of chemical goggles or a face shield. Eye and face protection must comply with ANSI Z87.1-1987. Ensure eyewash stations are available

SKIN PROTECTION: Wear chemical resistant gloves (rubber, neoprene or vinyl). Use personal protection equipment that is chemical resistant and prevents skin contact

RESPIRATORY PROTECTION: A respiratory protection program meeting OSHA's 29 CFR 1910.134 or ANSI's Z88.2 requirements must be followed whenever conditions warrant respirator use

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Use other PPE as required by the situation

SECTION 8 NOTES: None Available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: A clear colorless liquid

PHYSICAL STATE: Liquid

COLOR: colorless

ODOR: Characteristic vinous odor

pH AS SUPPLIED: N/A
pH (Other): N/A

FREEZING POINT:
F: -173.0°F
C: -113.9°C

BOILING POINT:
F: 172.9°F (@ 1 atm.)
C: 78.3°C (@ 1 atm.)

MELTING POINT: N/A
F:
C:

FLASH POINT:
F: -55.0°F (Ethanol; Closed Cup); -45.0°F (Denaturant; est.)
C: -48.3°C (Ethanol; Closed Cup); -42.8°C (Denaturant; est.)

EVAPORATION RATE (BASIS=1): N/A

FLAMMABILITY (by %volume):
UPPER FLAMMABILITY LIMIT: 19.0%
LOWER FLAMMABILITY LIMIT: 3.3%

VAPOR PRESSURE (mmHg): 44.6 mmHg @ 68°F (Ethanol); 6-15 mmHg @ 100°F (Denaturant)
@
F:
C:

VAPOR DENSITY (AIR = 1): 1.59
@
F:
C:

SOLUBILITY IN WATER: N/A

PARTITION COEFFICIENT n-octanol/water: N/A

AUTO-IGNITION TEMPERATURE:
F: 689.0°F
C: 365.0°C

DECOMPOSITION TEMPERATURE: N/A
F:
C:

SPECIFIC GRAVITY (H2O = 1): 0.79
@
F: 68.0°F
C: 20.0°C

PERCENT SOLIDS BY WEIGHT: N/A

PERCENT VOLATILE:100%
BY WT/BY VOL @
F:
C:

VOLATILE ORGANIC COMPOUNDS (VOC): N/A
WITH WATER: **LBS/GAL**
WITHOUT WATER: **LBS/GAL**

MOLECULAR WEIGHT: N/A

VISCOSITY: N/A
@
F:
C:

SECTION 9 NOTES: None Available

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: Does not react with air or water

STABILITY: Stable

CONDITIONS TO AVOID (STABILITY): Avoid contact with strong oxidizers, excessive heat, sparks or open flame

POSSIBILITY OF HAZARDOUS REACTIONS: Contact with Bromine pentafluoride is likely to cause fire or explosion. Ethanol ignites on contact with chromyl chloride. Ethanol ignites on contact with iodine heptafluoride gas. It ignites then explodes upon contact with nitrosyl perchlorate. Addition of platinum black catalyst caused ignition (ethyl alcohol 200 proof). Ethanol has an explosive reaction with the oxidized coating around potassium metal. Ethanol ignites and then explodes on contact with acetic anhydride + sodium hydrosulfate (ignites and may explode), disulfuric acid + nitric acid, phosphorous (III) oxide platinum, potassium-tert-butoxide + acids. Ethanol forms explosive products in reaction with the following compound: ammonia + silver nitrate (forms silver nitride and silver fulminate), iodine + phosphorus (forms ethane iodide), magnesium perchlorate (forms ethyl perchlorate), mercuric nitrate, nitric acid + silver (forms silver fulminate) silver nitrate (forms ethyl nitrate) silver(I) oxide + ammonia or hydrazine (forms silver nitride and silver fulminate), sodium (evolves hydrogen gas). Sodium Hydrazide + alcohol can produce an explosion. Alcohols should not be mixed with mercuric nitrate, as explosive mercuric fulminate may be formed. May form explosive mixture with manganese perchlorate + 2,2-dimethoxypropane. Addition of alcohols to highly concentrate hydrogen peroxide forms powerful explosives. Explodes on contact with calcium hypochlorite Vapor may explode if ignited in an enclosed area. Containers may explode when heated or involved in a fire.

INCOMPATIBILITY MATERIAL: Contact with acetyl chloride or other oxidizing agents may cause a violent reaction

HAZARDOUS DECOMPOSITION PRODUCTS: Not expected to decompose under normal conditions

SECTION 10 NOTES: None Available

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: The toxicity data of this product has not been determined by testing or research, but to our best knowledge, this product is minimally toxic. The toxicity data shown below is for reference only.

ROUTES OF EXPOSURE: Inhalation, ingestion, skin absorption

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS:

CONTACT WITH EYES: Generally causes pain, irritation and reflex lid closure. A foreign-body sensation may persist. Vapors produce stinging and tearing

CONTACT WITH SKIN: Slight irritant

INHALATION: Prolonged exposure may cause headache, drowsiness, loss of appetite, inability to concentrate or throat irritating

INGESTION: Grade 1; LD_{50}=5 to 15 g/kg

DELAYED AND IMMEDIATE EFFECTS AND ALSO CHRONIC EFFECTS FROM SHORT- AND LONG-TERM EXPOSURE: N/A

NUMERICAL MEASURES OF TOXICITY:

LD50/LC50: No data available

IRRITATION DATA:
Draize test: 20 mg/24H (Moderate) Skin, rabbit
Draize test: 500 mg (Severe) Administration into the eye (Rabbit)

CARCINOGENICITY: Ethyl Alcohol: Not listed by ACGIH, IARC, NTP, or CA Prop 65; Natural Gasoline: Possible Carcinogen (2B) listed by IARC; Benzene: Carcinogen (1) listed by IARC
Product contains Benzene, a known chemical to cause cancer in humans. Prolonged exposure to benzene vapors may cause diseases such as leukemia, immune system disorders and adverse reproductive effects. Similar naphtha distillates have produced skin tumors in laboratory animals. Chronic exposure to gasoline vapors caused liver tumors in mice and kidney tumors in rats. Prolonged/repeated oral exposure to alkylate naphthas has resulted in kidney damage in male rats

EPIDEMIOLOGY: Ethanol has been shown to produce fetotoxicity in the embryo or fetus of laboratory animals. Prenatal exposure to ethanol is associated with a distinct pattern of congenital malformations that have collectively been termed the "fetal alcohol syndrome".

TERATOGENICITY: Oral, Human-woman: TDLo=41 gm/kg (female 41 weeks after conception) Effects on Newborn-Apgar score (human only) and Effects on Newborn-other neonatal measures or effects and Effects on Newborn-drug dependence

REPRODUCTIVE EFFECTS: Excessive consumption of alcohol during pregnancy is associated with physical and developmental problems. It may also cause defects in the central nervous system, heart, kidney and limbs. Moderate consumption can be associated with reduced birth weight and behavioral defects. Intrauterine, Human-woman: TDLo=200 mg/kg (female 5 days pre-mating); Fertility-female fertility index (e.g. #females pregnant per # sperm positive females; #females pregnant per #females mated)

NEUROTOXICITY: No information available

MUTAGENICITY: DNA Inhibition: Human, Lymphocyte=220 mmol/L.; Cytogenetic Analysis: Human, Lymphocyte=1160 gm/L.; Cytogenetic Analysis: Human, Fibroblast=12000 ppm.; Cytogenetic Analysis: Human, Leukocyte=1 pph/72H (Continuous).; Sister Chromatid Exchange: Human, Lymphocyte=500 ppm/72H (Continuous)

SECTION 11 NOTES: None Available

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY (AQUATIC AND TERRESTRIAL, WHERE AVAILABLE):

Ecotoxicity: Fish: Rainbow trout: LC50=12900-15300 mg/L; 96 Hr; Flow-through @24-24.3°C
Fish: Rainbow trout: LC50=11200 mg/L; 24 Hr
Fingerling (unspecified) Bacteria: Phytobacterium phosphoreum: EC50=34900 mg/L; 5-30 min
Microtox test: When spilled on land it is apt to volatilize, biodegrade, and leach into the ground water, but no data on the rates of these processes could be found. Its fate in ground water is unknown. When released into water, it will volatilize and probably biodegrade. It would not be expected to adsorb to sediment or bioconcentrate in fish

PERSISTENCE AND DEGRADABILITY: When released to the atmosphere, it will photodegrade in hours (polluted urban atmosphere) to an estimated range of 4 to 6 days in less polluted areas. Rainout should be significant

BIOACCUMULATIVE POTENTIAL: Bioaccumulation is not significant. This product is readily biodegradable.

MOBILITY IN SOIL: Very high mobility

OTHER ADVERSE EFFECTS: No information available.

SECTION 12 NOTES: None Available

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification

RCRA HAZARD CLASS: RCRA P-Series-None listed; RCRA U-Series-None listed; Benzene is listed in RCRA U-list

DESCRIPTION OF WASTE RESIDUES AND INFORMATION ON THEIR SAFE HANDLING AND METHODS OF DISPOSAL, INCLUDING ANY CONTAMINATED PACKAGING: Carbon dioxide, carbon monoxide, ethanol vapor can go through rapid photochemical reaction in atmosphere

SECTION 13 NOTES: None Available

SECTION 14: TRANSPORT INFORMATION

U.N. GHS TRANSPORT REQUIREMENT

UN NUMBER: UN 1987
PROPER SHIPPING NAME: Alcohol n.o.s.
TRANSPORT HAZARD CLASS: 3
PACKING GROUP: II
LABEL STATEMENT: N/A
MARINE POLLUTANT: Leaded gasoline is marine pollutant; this product is not listed as a marine pollutant by the Department of Transportation.

SPECIAL PRECAUTIONS FOR USER: Extremely flammable liquid

SECTION 14 NOTES: None Available

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TOXIC SUBSTANCE CONTROL ACT (TSCA): All components are listed or exempted

OCCUPATIONAL, SAFETY AND HEALTH ADMINISTRATION (OSHA): Not defined as highly hazardous chemicals according to OSHA 1910.119 App A

COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT (CERCLA): Benzene is regulated in CERCLA

CLEAN WATER ACT (CWA): N/A

CLEAN AIR ACT (CAA): Benzene is regulated in CAA

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) TITLE III INFORMATION:

SARA SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES: N/A

SARA SECTION 311/312 (40 CFR 370) HAZARD CATEGORIES: Ethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; Gasoline: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; Gasoline, Natural: Fire hazard, Immediate (acute) health hazard , Delayed (chronic) health hazard

SARA 313 REPORTABLE INGREDIENTS: Benzene (71-43-2) D018;

STATE REGULATIONS:

Massachusetts Substances: The following components are listed: ETHYL ALCOHOL; GASOLINE
New Jersey Hazardous Substances: The following components are listed: ETHYL ALCOHOL; MOTOR FUEL, n.o.s.; GASOLINE
Pennsylvania RTK Hazardous Substances: The following components are listed: DENATURED ALCOHOL; GASOLINE

California Prop. 65: WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

INTERNATIONAL REGULATIONS:

European Labeling in Accordance with EC Directives
Hazard Symbols: F
Risk Phrases:
R11-Highly flammable
R45-May cause cancer
Safety Phrases:
S53-Avoid exposure-obtain special instructions before use
S2-Keep out of the reach of children
S46-If swallowed, seek medical advice immediately and show this container or label

WGK (Water Danger/Protection)
CAS# 64-17-5: 0
Canada-WHMIS
Class B-2: Flammable liquid
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic)
Canadian Ingredient Disclosure List
CAS# 64-17-5 is listed on the Canadian Ingredient Disclosure List

SECTION 15 NOTES: None Available

SECTION 16: OTHER INFORMATION

DISCLAIMER: 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 event shall Green Plains Renewable Energy, 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, howsoever arising, even if Green Plains Renewable Energy, Inc. has been advised of the possibility of such damages.

REFERENCES:

GHS Annex II
GHS SDS Instruction

ACRONYMS/ABBREVIATIONS:

ACGIH-American Conference of Governmental Industrial Hygienists
CAA-Clean Air Act
CAS-Chemical Abstracts Service
CERCLA-Comprehensive Response Compensation and Liability Act
CHEMTREC-It serves as a round-the-clock resource for obtaining immediate response information for incidents involving hazardous material and dangerous goods.
CWA-Clean Water Act
EC-European Commission
GHS-Globally Harmonized System of Classification and Labeling of Chemicals
IARC-International Agency for the Research on Cancer
ICSC-International Chemical Safety Cards
LC50-The concentration of a chemical in air or of a chemical in water which causes the death of 50% of a group of test animals.
LD50-The amount of a chemical, given all at once, which causes the death of 50% of a group of test animals.
NIOSH-The National Institute for Occupational Safety and Health
NTP-National Toxicology Program
OSHA-Occupational Safety and Health Administration
RCRA-Resource Conservation and Recovery Act
RQ-Reportable Quantity
SARA-Superfund Amendments and Reauthorization Act
STOST-SE-Specific Target Organ Toxicity Single Exposure
TPQ-Threshold Planning Quantity
TSCA-Toxic Substance Control Act
U.N.-United Nation
UNCED-United Nations Conference on Environment and Development
VOL-Volume
WT-Weight

SAFETY DATA SHEET

Ethanol – Pacific Ethanol Pekin

Section 1. Identification

GHS product identifier	Anhydrous Ethyl Alcohol SDA-29-1
Chemical name	Ethanol
Other means of identification	Ethyl alcohol; Denatured Alcohol; ALCOHOL; Ethyl alcohol (Ethanol)
Product use	
Synonym	
SOS #	Ethyl alcohol; Denatured Alcohol; ALCOHOL; Ethyl alcohol (Ethanol)
Supplier's details	Pacific Ethanol Pekin 1300 South Second Street Pekin, IL 61554 1-309-347-3200
Emergency telephone number (with hours of operation)	Chemtrec 1-800-424-9300

Section 2. Hazards identification

OSHA/HCS status	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	FLAMMABLE LIQUIDS - Category 2

GHS label elements

Hazard pictograms

Signal word	Danger
Hazard statements	Highly flammable liquid and vapor. May displace oxygen and cause rapid suffocation.

Precautionary statements

General	Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention	Wear protective gloves. Wear eye or face protection. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use and store only outdoors or in a well-ventilated place.
Response	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
Storage	Store in a well-ventilated place. Keep cool.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified	None known.

Section 3. Composition/information on ingredients

Substance/mixture	Substance
Chemical name	Ethanol
Other means of identification	Ethyl alcohol; Denatured Alcohol; ALCOHOL; Ethyl alcohol (Ethanol)

CAS number/other identifiers

CAS number	64-17-5
Product code	94006

Ingredient name	%	CAS number
Ethanol	95-99.99	64-17-5

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Frostbite	Try to warm up the frozen tissues and seek medical attention.
Ingestion	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	No specific data.

Section 4. First aid measures

Inhalation	No specific data.
Skin contact	No specific data.
Ingestion	No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Use dry chemical, CO_2, water spray (fog) or foam.
Unsuitable extinguishing media	Do not use water jet.
Specific hazards arising from the chemical	Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
Hazardous thermal decomposition products	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Special protective actions for fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non--emergency personnel".
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental

pollution (sewers, waterways, soil or air).

Section 6. Accidental release measures

Methods and materials for containment and cleaning up

Small release

Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large release

Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Ethanol	ACGIH TLV (United States, 3/2012). STEL: 1000 ppm 15 minutes. OSHA PEL 1989 (United States, 3/1989). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m^3 8 hours. NIOSH REL (United States, 1/2013). TWA: 1000 ppm 10 hours. TWA: 1900 mg/m^3 10 hours.

Section 8. Exposure controls/personal protection

	OSHA PEL (United States, 6/2010). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m^3 8 hours.

Appropriate engineering controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state Liquid. [CLEAR, COLORLESS LIQUID WITH A WEAK, ETHEREAL, VINOUS ODOR]

Color Colorless. Clear.

Molecular weight

Molecular formula

Boiling/condensation point 78°C

Section 9. Physical and chemical properties

Melting/freezing point	-114°C
Critical temperature	Not available.
Odor	Characteristic.
Odor threshold	Not available.
pH	Not available.
Flash point	Closed cup: 57°F
Burning time	Not applicable.
Burning rate	Not applicable.
Evaporation rate	2.1 (Butyl Acetate = 1)
Flammability (solid, gas)	Not available.
Lower and upper explosive (flammable) limits	Lower: 3.3% Upper: 19%
Vapor pressure	(mm Hg.)
Vapor density	1.6 (Air = 1)
Solubility in water	>10% by weight at 20°C
Auto-ignition temperature	685°F
SADT	
Viscosity	

Section 10. Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Incompatibility with various substances	Highly reactive or incompatible with the following materials: oxidizing materials and alkalis.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure	Not available.

Potential acute health effects

Eye contact	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	No specific data.
Inhalation	No specific data.
Skin contact	No specific data.
Ingestion	No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	Potential delayed effects

Long term exposure

Section 11. Toxicological information

Not available.

Not available.

Section 11. Toxicological information

Potential immediate effects	Not available.
Potential delayed effects	Not available.

Potential chronic health effects

Not available.

General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Mobility in soil

Soil/water partition coefficient (Koc)	Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere

Section 13. Disposal considerations

inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT	TDG
UN number	UN1170	UN1170
UN proper shipping name	ETHANOL OR ETHYL ALCOHOL OR ETHANOL SOLUTIONS OR ETHYL ALCOHOL SOLUTIONS	ETHANOL MORE THAN 24 PER CENT ETHANOL, BY VOLUME; ETHANOL SOLUTION MORE THAN 24 PER CENT ETHANOL, BY VOLUME; ETHYL ALCOHOL MORE THAN 24 PER CENT ETHANOL, BY VOLUME; OR ETHYL ALCOHOL SOLUTION MORE THAN 24 PER CENT ETHANOL, BY VOLUME
Transport hazard class(es)	3	3
Packing group	II	II
Environment	No.	No.
Additional information	Limited quantity: Yes. Packaging instruction: Passenger aircraft Quantity limitation: 5 L Cargo aircraft Quantity limitation: 60 L	Exposure limit and Limited quantity index: 5

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not available.

Section 15. Regulatory information

U.S. Federal regulations	TSCA 8(a) CDR Exempt/Partial exemption: Not determined United States inventory (TSCA 8b): This material is listed or exempted.
Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)	Not listed
Clean Air Act Section 602 Class ISubstances	Not listed
Clean Air Act Section 602 Class II Substances	Not listed
DEA List IChemicals (Precursor Chemicals)	Not listed
DEA List II Chemicals (Essential Chemicals)	Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ	Not applicable.

SARA 311/312

Classification	Fire hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
ethanol	95-99.99	Yes.	No.	No.	No.	No.

International regulations

International lists	Australia inventory (AICS): This material is listed or exempted. China inventory (IECSC): This material is listed or exempted. Japan inventory: This material is listed or exempted. Korea inventory: This material is listed or exempted. Malaysia Inventory (EHS Register): Not determined. New Zealand Inventory of Chemicals (NZIoC): This material is listed or exempted. Philippines inventory (PICCS): This material is listed or exempted. Taiwan inventory (CSNN): Not determined.
Chemical Weapons Convention List Schedule I Chemicals	Not listed
Chemical Weapons Convention List Schedule II Chemicals	Not listed

Section 15. Regulatory information

Chemical Weapons Convention List Schedule IIIChemicals : Not listed

Canada

WHMIS (Canada)

Class 8-2: Flammable liquid
Class D-28: Material causing other toxic effects (Toxic).

CEPA Toxic substances: This material is not listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.

Section 16. Other information

Canada Label requirements : Class 8-2: Flammable liquid
Class D-28: Material causing other toxic effects {Toxic).

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		3
Physical hazards		0

Caution! : ffMIS® ratings are based ,on a -0-4 rating scale, with O representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 120Q, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program:HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health

Flammability
Instability/Reactivity
Special

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications In NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Section 16. Other information

Key to abbreviations

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United NationsACGIH - American Conference of Governmental Industrial Hygienists
AIHA - American Industrial Hygiene Association
CAS - Chemical Abstract Services
CEPA - Canadian Environmental Protection Act
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act (EPA)
CFR - United States Code of Federal Regulations
CPR - Controlled Products Regulations
DSL - Domestic Substances List
GWP - Global Warming Potential
IARC - International Agency for Research on Cancer
ICAO - International Civil Aviation Organisation
Inh - Inhalation
LC - Lethal concentration
LD - Lethal dosage
NDSL - Non-Domestic Substances List
NIOSH - National Institute for Occupational Safety and Health
TOG - Canadian Transportation of Dangerous Goods Act and Regulations
TLV - Threshold Limit Value
TSCA - Toxic Substances Control Act
WEEL - Workplace Environmental Exposure Level
WHMIS - Canadian Workplace Hazardous Material Information System

Safety Data Sheet
HEMPEL'S LIGHT CLEAN 99350

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2015/830 - Europe

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name :	HEMPEL'S LIGHT CLEAN 99350
Product identity :	9935000000
Product type :	cleaner

1.2 Relevant identified uses of the substance or mixture and uses advised against

Field of application :	metal industry, ships and shipyards.
Identified uses :	Industrial applications, Used by spraying.

1.3 Details of the supplier of the safety data sheet

Company details :	HEMPEL A/S Lundtoftegårdsvej 91 DK-2800 Kgs. Lyngby Denmark Tel.: + 45 45 93 38 00 hempel@hempel.com
Date of issue :	12 February 2016
Date of previous issue :	1 July 2015.

1.4 Emergency telephone number

Emergency telephone number (with hours of operation)

+45 45 93 38 00 (08.00 - 17.00)
See section 4 First aid measures.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Skin Corr. 1, H314	SKIN CORROSION/IRRITATION - Category 1
Eye Dam. 1, H318	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Aquatic Chronic 3, H412	AQUATIC HAZARD (LONG-TERM) - Category 3

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :

Signal word :	Danger
Hazard statements :	H314 - Causes severe skin burns and eye damage. H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements :	
Prevention :	Do not breathe gas, vapor or spray. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection.
Response :	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Rinse skin with water or shower. Take off immediately all contaminated clothing. Immediately call a POISON CENTER or doctor.
Hazardous ingredients :	[illegible]9-C11 alcohol ethoxylate sodium metasilicate pentahydrate

Special packaging requirements

Containers to be fitted with child-resistant fastenings :	Not applicable.
Tactile warning of danger :	Not applicable.

Attachment 15 Page 1 of 9

2.3 Other hazards

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
tetrapotassium pyrophosphate	EC: 230-785-7 CAS: 7320-34-5	≥5 - ≤10	Eye Irrit. 2, H319 -	[1]
C9-C11 alcohol ethoxylate	CAS: *68439-46-3	≥3 - ≤5	Eye Dam. 1, H318 -	[1]
sodium metasilicate pentahydrate	EC: 229-912-9 CAS: 10213-79-3 Index: 014-010-00-8	≥1 - ≤3	Skin Corr. 1B, H314 - Eye Dam. 1, H318 STOT SE 3, H335	[1]
quaternary coco alkylamine ethoxylate	CAS: 61791-10-4	≥1 - ≤3	Eye Dam. 1, H318 - Aquatic Chronic 2, H411 See Section 16 for the full text of the H statements declared above.	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit, see section 8.
[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
[5] Substance of equivalent concern

Detergents - Regulation (EC) No 907/2006

Product/ingredient name	CAS no.	%	Class of constituent
water	7732-18-5	10% or more	
tetrapotassium pyrophosphate	7320-34-5	1% or over, but less than 10%	phosphates
C9-C11 alcohol ethoxylate	*68439-46-3	1% or over, but less than 10%	non-ionic surfactants
sodium metasilicate pentahydrate	10213-79-3	1% or over, but less than 10%	
quaternary coco alkylamine ethoxylate	61791-10-4	1% or over, but less than 10%	cationic surfactants
glycerin	56-81-5	0,1% or over, but less than 1%	
chlorine	Sec. (*7782-50-5)	less than 0,1%	
silicone resin		less than 0,1%	
polyoxyethylene stearyl ether	9005-00-9	less than 0,1%	

SECTION 4: First aid measures

4.1 Description of 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.

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 112 and give immediate treatment (first aid).

Eye contact :

Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek immediate medical attention.

Inhalation :

Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Give nothing by mouth. If unconscious, place in recovery position and get medical attention immediately.

Skin contact :

Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners. In case of burns flush with water until the pain ceases. While flushing remove clothing from the affected area unless it is burnt into the skin. If hospital treatment is necessary flushing must continue during transfer and until the hospital staff takes over the treatment.

Ingestion :

If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so that vomit will not re-enter the mouth and throat.

Protection of first-aiders :

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact :

Causes serious eye damage.

Inhalation :

No known significant effects or critical hazards.

SECTION 4: First aid measures

Skin contact :	Causes severe burns.
Ingestion :	No known significant effects or critical hazards.
Over-exposure signs/symptoms	
Eye contact :	Adverse symptoms may include the following: pain watering redness
Inhalation :	No specific data.
Skin contact :	Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion :	Adverse symptoms may include the following: stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician :	If gasses have been inhaled, from the decomposition of the product, symptoms may be delayed. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments :	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media :	Recommended: alcohol resistant foam, CO_2, powders, water spray. Not to be used: waterjet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture :	In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous combustion products :	Decomposition products may include the following materials: carbon oxides nitrogen oxides phosphorus oxides metal oxide/oxides

5.3 Advice for firefighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid all direct contact with the spilled material. Refer to protective measures listed in sections 7 and 8. No action shall be taken involving any personal risk or without suitable training. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Contaminated absorbent material may pose the same hazard as the spilled product.

SECTION 6: Accidental release measures

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

Storage : Do not store below the following temperature: 5 °C

7.3 Specific end use(s)

See separate Product Data Sheet for recommendations or industrial sector specific solutions.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Product/ingredient name	Exposure limit values
No exposure limit value known.	

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Derived effect levels

No DNELs/DMELs available.

Predicted effect concentrations

No PNECs available.

8.2 Exposure controls

Appropriate engineering controls

Arrange sufficient ventilation by local exhaust ventilation and good general ventilation to keep the airborne concentrations of vapors or dust lowest possible and below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Individual protection measures

General : Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. Safety eyewear should be used when there is a likelihood of exposure.

Hygiene measures : Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

SECTION 8: Exposure controls/personal protection

Eye/face protection :	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
Hand protection :	Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. The quality of the chemical-resistant protective gloves must be chosen as a function of the specific workplace concentrations and quantity of hazardous substances. Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type. Below listed glove(s) should be regarded as generic advice: Recommended: Silver Shield / 4H gloves, nitrile rubber, neoprene rubber, butyl rubber, natural rubber (latex), polyvinyl alcohol (PVA), polyvinyl chloride (PVC), Viton®
Body protection :	Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product. Wear suitable protective clothing. Always wear protective clothing when spraying. Chemical-resistant apron.
Respiratory protection :	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. When the product is applied by spraying and for continuous or prolonged work always wear an air-fed respirator e.g. hood with supply of fresh or compressed air or a full face, powered air purifying filter. Wear appropriate respirator when ventilation is inadequate. Be sure to use approved/certified respirator or equivalent. It is not possible to specify precise filter type, since the actual work situation is unknown. Supplier of respirators should be contacted in order to find the appropriate filter.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state :	Liquid.
Odor :	Non-characteristic.
pH :	12
Melting point/freezing point :	0°C This is based on data for the following ingredient: water
Boiling point/boiling range :	Testing not relevant or not possible due to nature of the product.
Flash point :	Non-flammable.
Evaporation rate :	Testing not relevant or not possible due to nature of the product.
Flammability :	Non-flammable.
Lower and upper explosive (flammable) limits :	No specific data.
Vapor pressure :	3.17 kPa This is based on data for the following ingredient: water
Vapor density :	Testing not relevant or not possible due to nature of the product.
Relative density :	1.057 g/cm³
Solubility(ies) :	Easily soluble in the following materials: cold water and hot water.
Partition coefficient (LogKow) :	Testing not relevant or not possible due to nature of the product.
Auto-ignition temperature :	Testing not relevant or not possible due to nature of the product.
Decomposition temperature :	Testing not relevant or not possible due to nature of the product.
Viscosity :	Testing not relevant or not possible due to nature of the product.
Explosive properties :	Testing not relevant or not possible due to nature of the product.
Oxidizing properties :	Testing not relevant or not possible due to nature of the product.

9.2 Other information

Solvent(s) % by weight : Weighted average: 0 %

SECTION 9: Physical and chemical properties

TOC Content : Weighted average: 0 g/l

Solvent Gas : Weighted average: 0 m³/l

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

No specific data.

10.5 Incompatible materials

10.6 Hazardous decomposition products

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed:

Decomposition products may include the following materials: carbon oxides nitrogen oxides phosphorus oxides metal oxide/oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Inhalation of a corrosive substance may result in health effects such as stinging, coughing and in extreme cases, dyspnoea or loss of consciousness with a risk of lung damage, possibly lung oedema. Cauterization of skin and mucous membrane. If splashed in the eyes, the liquid may cause ireversible damage. Accidental swallowing may cause stinging and cauterization to mouth, oesophagus and stomach. Symptoms and signs include bloody vomiting, chock and loss of consciousness.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
9-C11 alcohol ethoxylate	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
sodium metasilicate pentahydrate	LD50 Oral	Rat	847 mg/kg	-
quaternary coco alkylamine ethoxylate	LD50 Oral	Rat	>2000 mg/kg	-

Acute toxicity estimates

Route	ATE value
No known significant effects or critical hazards.	

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure
quaternary coco alkylamine ethoxylate	Skin - Irritant	Rabbit	-	-
	Eyes - Severe irritant	Rabbit	-	-

Mutagenic effects

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Teratogenic effects

No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

SECTION 11: Toxicological information

Product/ingredient name	Category	Route of exposure	Target organs
sodium metasilicate pentahydrate	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
No known data avaliable in our database.			

Aspiration hazard

Product/ingredient name	Result
No known data avaliable in our database.	

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

Other information : No additional known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Do not allow to enter drains or watercourses. Harmful to aquatic life with long lasting effects.

Product/ingredient name	Result	Species	Exposure
quaternary coco alkylamine ethoxylate	Acute EC50 1 - 10 mg/l Acute EC50 10 - 100 mg/l Acute LC50 10 - 100 mg/l	Algae Daphnia Fish	72 hours 48 hours 96 hours

12.2 Persistence and degradability

No known data avaliable in our database.

12.3 Bioaccumulative potential

No known data avaliable in our database.

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : No known data avaliable in our database.

Mobility : No known data avaliable in our database.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Residues of the product is listed as hazardous waste. Dispose of according to all state and local applicable regulations. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

European waste catalogue no. (EWC) is given below.

European waste catalogue (EWC) : 08 01 11*

Packaging

SECTION 14: Transport information

Transport may take place according to national regulation or ADR for transport by road, RID for transport by train, IMDG for transport by sea, IATA for transport by air.

	14.1 UN no.	14.2 Proper shipping name	14.3 Transport hazard class(es)	14.4 PG*	14.5 Env*	Additional information
ADR/RID Class	UN3066	PAINT RELATED MATERIAL	8	III	No.	**Tunnel code** (E)
IMDG Class	UN3066	PAINT RELATED MATERIAL. (quaternary coco alkylamine ethoxylate)	8	III	Yes.	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. **Emergency schedules (EmS)** F-A, S-B
IATA Class	UN3066	PAINT RELATED MATERIAL	8	III	No.	The environmentally hazardous substance mark may appear if required by other transportation regulations.

PG* : Packing group
Env.* : Environmental hazards

14.6 Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH) Annex XIV - List of substances subject to authorization - Substances of very high concern

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

Other EU regulations

Seveso category This product is not controlled under the Seveso III Directive.

Detergents - Regulation (EC) No 907/2006

Contains (EU Detergents Regulation) : 5% or over but less than 15%: phosphates. less than 5%: non-ionic surfactants, cationic surfactants.

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Abbreviations and acronyms :

ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
EUH statement = CLP-specific Hazard statement
RRN = REACH Registration Number
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration

SECTION 16: Other information

Full text of abbreviated H statements :	H314	Causes severe skin burns and eye damage.
	H318	Causes serious eye damage.
	H319	Causes serious eye irritation.
	H335	May cause respiratory irritation.
	H411	Toxic to aquatic life with long lasting effects.
	H412	Harmful to aquatic life with long lasting effects.
Full text of classifications [CLP/GHS] :	Aquatic Chronic 2, H411	AQUATIC HAZARD (LONG-TERM) - Category 2
	Aquatic Chronic 3, H412	AQUATIC HAZARD (LONG-TERM) - Category 3
	Eye Dam. 1, H318	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
	Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
	Skin Corr. 1, H314	SKIN CORROSION/IRRITATION - Category 1
	Skin Corr. 1B, H314	SKIN CORROSION/IRRITATION - Category 1B
	STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
SKIN CORROSION/IRRITATION - Category 1	On basis of test data
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1	On basis of test data
AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method

Notice to reader

Indicates information that has changed from previously issued version.

The information contained in this safety data sheet is based on the present state of knowledge and EU and national legislation. It provides guidance on health, safety and environmental aspects for handling the product in a safe way and should not be construed as any guarantee of the technical preformance or suitability for particular applications.
It is always the duty of the user/employer to ascertain that the work is planned and carried out in accordance with the national regulations.

CRUDE OIL

740531-~~111~~ 111

740675-1/11

PETROLEUM DISTILLATES

733423-11

733544-1

PAINT WASTE - 1.

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD 045 936 232
2. Page 1 of 1
3. Emergency Response Phone: 800-424-9300, PI
4. Manifest Tracking Number: 003124088 GBF

5. Generator's Name and Mailing Address: GEM TAILORS SERVICES, PO BOX 126, PITTSBURG, KS 66762

Generator's Site Address (if different than mailing address): GEM TAILORS SERVICES, 16526 250TH ROAD, CUMMINGS, KS 66016

Generator's Phone: (866) 785-4082

6. Transporter 1 Company Name: HOUTAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: [illegible]

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: [illegible] — U.S. EPA ID Number: [illegible]

Facility's Phone: (313) [illegible]

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. [illegible]	001	DM	150	P	[illegible]
X	2. RQ, UN1993, WASTE FLAMMABLE LIQUID, N.O.S., 3, PGII, (DIESEL) (D001, D018) ERG #128	015	DM	6000	P	D001 D018
	3.					
	4					

14. Special Handling Instructions and Additional Information: 1) [illegible]

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrea Jones — Signature: [signature] — Month 8 Day 10 Year 1

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: [illegible] — Signature: [signature] — Month 8 Day 10 Year 1

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number.

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

Crystal Clean

WORK ORDER

HERITAGE-CRYSTAL CLEAN, LLC
(877) 938-7948

KANSAS CITY
CREDIT ALERT

EMP ID #	SVC WK	WORK ORDER #	SVC REQ	AGRMT #	PURCHASE ORDER #	PAGE
	31	00-008SNGO	157381	475910	239097	1 of 1

CCMS CUST. ID #	ROUTE	FEDERAL EPA ID #
101925	KANSAS CITY - ROUTE 2	KSD043936277

COMMENTS	GEN. STATUS	STATE EPA ID #
EMERGENCY#: 800-424-9300	LOG	

DRIVER MUST CALL DAY BEFORE SVC. GET PO# EACH SVC FROM LISA 12/6/10 MH. NO PO#-NO PAY (DN 11-10-15)

CUSTOMER/SHIPPER: GSW RAILCAR SERVICES
15624 258TH ROAD
CUMMINGS, KS 66016
Contact Name: ANDREA JONES (866)755-4082

DESTINATION: HERITAGE-CRYSTAL CLEAN, LLC
30 FUNSTON ROAD
KANSAS CITY, KS 66115
Phone Number: (913)233-2651

CARRIER: HERITAGE-CRYSTAL CLEAN, LLC **EPA ID #:** ILR 000 130 062 **Phone Number:** (877) 938-7948

BILL OF LADING

16 GAL. DRUMS	30 GAL. DRUMS	55 GAL. DRUMS	PROPER SHIPPING NAME	TOTAL	UNITS

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transport according to the applicable regulations of the Department of Transportation, as required. I also certify that neither hazardous waste, nor PCBs have been mixed with the used oil and/or parts cleaner solvent (if applicable).

Per _____ Customer/Shipper Date

Per Matt Ramsdell 08-10-16 HCC/Carrier Date

SUMMARY OF CHARGES

TODAY'S SERVICE

WS #	PROD. CODE	DESCRIPTION	RTD. GALS.	UNIT	SI	NEXT SVC.	LOCATION COMMENTS	UNIT PRICE	QTY.	TOTAL CHARGE
284351-11	1011A	55G SOLID FUEL		NONE	1	32	SOUDBILLDGE PAINT	377.34 ~~$414.70~~	(1)	377.34
	174	ENERGY SURCHARGE		NONE				~~$10.17~~	~~--~~	~~$10.17~~
284351-22	~~[illegible]~~/011A- 55G SOLID FUEL						CRUDE OIL	377.34	(15)	5660.10

TAX $ ~~$10.17~~

SERVICE SUBTOTAL

PRODUCTS

PRODUCT DESCRIPTION:	UNIT PRICE	QTY.	CHARGE

PRODUCT SALES TAX

SUBTOTAL PRODUCT & TAX

MACHINE INSPECTION		
Cleanliness	G	P
Lamp Assembly	G	P
Drum Condition	G	P
Fusible Link Installed	G	P
Lid Unobstructed	G	P
Properly Grounded	G	P
Local Phone # affixed	G	P
Decals in Place	G	P

SERVICE/PRODUCTS CHARGE SUMMARY

CUSTOMER HEREBY VERIFIES THAT THE ABOVE SERVICES WERE PERFORMED AND THAT SAID SERVICES AND THE CHARGES THEREFORE ARE HEREBY ACCEPTED. CUSTOMER ALSO HEREBY REAFFIRMS THE ACCURACY AND COMPLETENESS OF ALL INFORMATION CONTAINED IN THIS WORK ORDER AND ALL DOCUMENTATION PREVIOUSLY SUBMITTED TO HCC. THIS WORK ORDER IS DEEMED PART OF THE SERVICE AGREEMENT BETWEEN HERITAGE-CRYSTAL CLEAN, LLC AND THE CERTIFICATIONS CONTAINED THEREIN CONCERNING THE MATERIALS TO BE HANDLED AND THE SERVICES TO BE PROVIDED ARE INCORPORATED HEREIN BY REFERENCE AND DEEMED PART HEREOF AND SAID CERTIFICATIONS ARE DEEMED REMADE FOR THE SERVICES COVERED BY THIS WORK ORDER.

PER _____ *DATE* _____

TODAY'S SERVICE	6037.44
PRODUCT & TAX	
TOTAL AMOUNT DUE	
TOTAL REMITTANCE	
CHECK NUMBER	

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FORM 20310

Attachment 16 Page 3 of 3

EMERGENCY HI I N T N O

GBW RAILCAR SERVICES, LLC

GBW Rail Services - Atchison
PO Box 436
Atchison, KS 66002

Non - Hazardous Waste Ma
KSD043936277
2016

WO #	LINE ITEM	MATERIAL TYPE	Special Handling Instructions	# Containers	POUNDS	TYPE OF CONT	Unit	DATE SHIPPED
854VH	A	NA, 1993, Diesel Fuel, 3, PGIII, ERG#128	CC:284351-8 TSD: 133305-8	1	300	DM	Pounds	1/13/2015
854VJ		Non-DOT Regulated (Used Oil)	*Wastewater non	Bulk	2,800	Bulk	Gallon	1/12/2016
832DC		Non-DOT Regulated (Used Oil)		Bulk	1,950	Bulk	Gallon	1/12/2016
87BA6		Non-DOT Regulated (Used Oil)		Bulk	1,990	Bulk	Gallon	1/13/2016
87EAJ		Non-DOT Regulated (Used Oil)		Bulk	2,750	Bulk	Gallon	1/15/2016
84DRS	A	Non-DOT Regulated (Crude Palm Oil)		7	2,800	Drum	Pounds	1/29/2016
88RGY		Non-DOT Regulated (Wash Water)		Bulk	1,500	Bulk	Gallon	1/29/2016
89C2S		Non-DOT Regulated (Wash Water)		Bulk	1,400	Bulk	Gallon	2/4/2016
87234	A	Non-DOT Regulated (Crude Palm Oil)		2	600	Drum	Pounds	2/10/2016
85RAJ		Non-DOT Regulated (Wash Water)		Bulk	2,400	Bulk	Gallon	2/19/2016
8B8CM		Non-DOT Regulated (Wash Water)		Bulk	1,600	Bulk	Gallon	2/22/2016
854V6	A	Non-DOT Regulated (Soybean Oil)		3	1,200	Drum	Pounds	2/23/2016
854V6	B	Non-DOT Regulated (Non-Haz Absorbent-Rags)		1	350	Drum	Pounds	2/23/2016
84DRT		Non-DOT Regulated (Wash Water)		Bulk	1,650	Bulk	Gallon	2/25/2016

8C1RG		Non-DOT Regulated (Wash Water)		Bulk	970	Bulk	Gallon	3/2/2016
8CN2NW		Non-DOT Regulated (Wash Water)		Bulk	2,800	Bulk	Gallon	3/3/2016
8CMK2		Non-DOT Regulated (Wash Water)		Bulk	1,275	Bulk	Gallon	3/8/2016
8CTDK		Non-DOT Regulated (Wash Water)		Bulk	800	Bulk	Gallon	3/11/2016
8DEGW		Non-DOT Regulated (Wash Water)		Bulk	1,475	Bulk	Gallon	3/17/2016
8E4T9		Non-DOT Regulated (Wash Water)		Bulk	900	Bulk	Gallon	3/24/2016
8ETN1		Non-DOT Regulated (Wash Water)		Bulk	1,250	Bulk	Gallon	3/30/2016
8ACBN		Non-DOT Regulated (Wash Water)		3	1,350	Bulk	Gallon	4/6/2016
8GHCK		Non-DOT Regulated (Wash Water)		Bulk	1,950	Bulk	Gallon	4/6/2016
8H6N1		Non-DOT Regulated (Wash Water)		Bulk	1,300	Bulk	Gallon	4/14/2016
8HXJK		Non-DOT Regulated (Wash Water)		Bulk	1,300	Bulk	Gallon	4/22/2016
8G579		Non-DOT Regulated (Wash Water)		9	3,600	Drum	Pounds	4/25/2016
8GV39		Non-DOT Regulated (Wash Water)		6	2,700	Drum	Pounds	5/5/2016
8K9TX		Non-DOT Regulated (Wash Water)		Bulk	1,118	Bulk	Gallon	5/6/2016
8L0SY		Non-DOT Regulated (Wash Water)		Bulk	1,875	Bulk	Gallon	5/13/2016
8KKAH		Non-DOT Regulated (Wash Water)		3	1,200	Drum	Pounds	6/1/2016
8MX7D		Non-DOT Regulated (Wash Water)		Bulk	1,100	Bulk	Gallon	6/1/2016
8NNN9		Non-DOT Regulated (Wash Water)		Bulk	650	Bulk	Gallon	6/10/2016
8R2YA		Non-DOT Regulated (Wash Water)		Bulk	1,800	Bulk	Gallon	6/24/2016
8MM5M		Non-DOT Regulated (Crude Wash Water)		4	MM ~~2,300~~ 1,600	Drum	Pounds	7/5/2016

Work order 8MM5M

Attachment 17 Page 2 of 3

8SYYJ		Non-DOT Regulated (Wash Water)		Bulk	330	Bulk	Gallon	7/13/2016
8RATN		Non-DOT Regulated (Non-Haz Absorbent - Debris)		4	1,200	Drum	Pounds	8/4/2016
8W56V		Non-DOT Regulated (Wash Water)		Bulk	575	Bulk	Gallon	8/5/2016
			TOTAL POUNDS 2016		**57,108**			
			TOTAL TONS 2016		**29**			

HERITAGE - CRYSTAL CLEAN - BILL OF LADING

HCC 196 Loc: KANSAS CITY Route: 2 Page 1 of 1
Doc #: - PB:130228 WO #: 8MMSM

Shipper's Name And Mailing Address
GBW RAILCAR SERVICES
15624 258TH ROAD
CUMMINGS, KS 66016
Generator Phone: 866-785-4082

Physical Address

Generator EPA ID KSD043936277
Generator State ID

Transporter 1 Company Name	Transp 1 EPA Id	Transp 1 State Id	Transp 1 Phone
HERITAGE-CRYSTAL CLEAN, LLC	ILR000130062		(847)836-5670
Transporter 2 Company Name	**Transp 2 EPA Id**	**Transp 2 State Id**	**Transp 2 Phone**
Transporter 3 Company Name	**Transp 3 EPA Id**	**Transp 3 State Id**	**Transp 3 Phone**
Receiving Facility	**Facility EPA Id**	**Facility State Id**	**Facility Phone**
HERITAGE-CRYSTAL CLEAN, LLC. 1560 WEST RAYMOND ST INDIANAPOLIS, IN 46221	ILR000130062 24Hr Emergency Pho: (800)424-9300		

	HM	Waste Shipping Description and DOT Description (as applicable)	Container No.	Type	Total Qty	Unit Wt/vol
A		NON-DOT/RCRA REGULATED,(WASH WATER)	004	DM	1600	P
B						
C						
D						

Special Handling Instructions, Additional Information and Handling Codes (as Applicable)
A)CC: 284351-15 TSD: 8405

SHIPPERS CERTIFICATION: I certify that the material(s) described above on this bill of lading are fully and accurately described and are not subject to full regulation under the Resource Conservation and Recovery Act except 261.5 as related to CESQGs.

X Andrea Jones — Printed/Typed Name — X — Signature — 07-05-16 — Date

Transporter 1 Acknowledgement of Receipt Materials
MATT RINGGOLD — Printed/Typed Name — Signature — 07-05-16 — Date

Transporter 2 Acknowledgement of Receipt Materials
Printed/Typed Name — Signature — Date

Transporter 3 Acknowledgement of Receipt Materials
Printed/Typed Name — Signature — Date

Additional Description / Discrepancies

Facility Owner or Operator: Certification of receipt of waste materials covered by this bill of lading.
Gerald Whicker — Printed/Typed Name — Signature — 7-21-16 — Date

Crystal Clean

WORK ORDER

HERITAGE-CRYSTAL CLEAN, LLC
(877) 938-7948

KANSAS CITY
CREDIT ALERT

EMP ID #	SVC WK	WORK ORDER #	SVC REQ	AGRMT #	PURCHASE ORDER #	PAGE
	25	00-008MM5M	157381	475910		1 of 1

CCMS CUST. ID #	ROUTE	FEDERAL EPA ID #
101925	KANSAS CITY - ROUTE 2	KSD043936277

COMMENTS	GEN. STATUS	STATE EPA ID #
M EN # 800-4 4-930L	LOG	

DRIVER MUST CALL DAY BEFORE SVC. GET EMA CALL BACK SVC FROM LISA 12/6/10 MH. RC EOM-NO EAY (DN 11-10-15)

CUSTOMER/SHIPPER: GBW RAILCAR SERVICES
15624 258TH ROAD
CUMMINGS, KS 66016

Contact Name. ANDREA JONES (866)785-4082

DESTINATION: HERITAGE-CRYSTAL CLEAN, LLC
30 FLINSTON ROAD
KANSAS CITY, KS 66115

Phone Number: (913)233-2651

CARRIER: HERITAGE-CRYSTAL CLEAN, LLC **EPA ID #:** ILR 000 130 062 **Phone Number:** (877) 938-7948

BILL OF LADING

16 GAL. DRUMS	30 GAL. DRUMS	55 GAL. DRUMS	PROPER SHIPPING NAME	TOTAL	UNITS

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transport according to the applicable regulations of the Department of Transportation, as required. I also certify that neither hazardous waste, nor PCBs have been mixed with the used oil and/or parts cleaner solvent (if applicable).

Per _____
Customer/Shipper Date

Per Matt Tengel 07-05-16
HCC/Carrier Date

SUMMARY OF CHARGES

TODAY'S SERVICE

WS #	PROD. CODE	DESCRIPTION	RTD. GALS.	UNIT	SI	NEXT SVC.	LOCATION COMMENTS	UNIT PRICE	QTY.	TOTAL CHARGE
284351-11	1011A	SSG SOLID FUEL		NONE	1	26	SOLID FUEL	377.37	(3)	1132.02
	174	ENERGY SURCHARGE		NONE						
284351-15	10HA	556 NON-HAZ ENERGY/REC					CRUDE OIL/WASH WATER	205.05	(4)	820.20
							CBTX 72917			

TAX
SERVICE SUBTOTAL

PRODUCTS

PRODUCT DESCRIPTION:	UNIT PRICE	QTY.	CHARGE

PRODUCT SALES TAX
SUBTOTAL PRODUCT & TAX

MACHINE INSPECTION		
Cleanliness	G	P
Lamp Assembly	G	P
Drum Condition	G	P
Fusible Link Installed	G	P
Lid Unobstructed	G	P
Properly Grounded	G	P
Local Phone # affixed	G	P
Decals in Place	G	P

SERVICE/PRODUCTS CHARGE SUMMARY

CUSTOMER HEREBY VERIFIES THAT THE ABOVE SERVICES WERE PERFORMED AND THAT SAID SERVICES AND THE CHARGES THEREFORE ARE HEREBY ACCEPTED. CUSTOMER ALSO HEREBY REAFFIRMS THE ACCURACY AND COMPLETENESS OF ALL INFORMATION CONTAINED IN THIS WORK ORDER AND ALL DOCUMENTATION PREVIOUSLY SUBMITTED TO HCC. THIS WORK ORDER IS DEEMED PART OF THE SERVICE AGREEMENT BETWEEN HERITAGE-CRYSTAL CLEAN, LLC AND THE CERTIFICATIONS CONTAINED THEREIN CONCERNING THE MATERIALS TO BE HANDLED AND THE SERVICES TO BE PROVIDED ARE INCORPORATED HEREIN BY REFERENCE AND DEEMED PART HEREOF AND SAID CERTIFICATIONS ARE DEEMED REMADE FOR THE SERVICES COVERED BY THIS WORK ORDER

PER _____ *DATE* _____

TODAY'S SERVICE	1952.22
PRODUCT & TAX	
TOTAL AMOUNT DUE	
TOTAL REMITTANCE	
CHECK NUMBER	

Waste Determination Documentation Form

Facility Name: GBW Railcar Services

Waste Name: ~~Ethanol~~ Wash Water LPG Cars N.O.S.

Description of Process: Flare off heel in tank car by process C-001-1. Rinse car for decontamination

Pounds of waste generated each month: 202 Lbs

Does this waste meet the definition of a solid waste?	Yes	(No)
Is this waste exempt from the definition of solid waste or hazardous waste?	(Yes)	No
Was laboratory analysis used to make this determination?	(Yes)	No

If yes, record the name and KDHE certificate number for the laboratory: Copy Attached
If yes, **attach** a copy of the analytical results to this sheet.

Was knowledge of the process used to make this determination?	(Yes)	No

If yes, list the name and date of each document (MSDS, process flow diagrams, etc.) reviewed and/or **attach** them to this sheet:

Cleaning procedure C-001-1
SDS
PH Testing of wash water

Is this waste non-hazardous?	(Yes)	No
Is this waste a listed hazardous waste?	Yes	(No)
If yes, list waste codes:		
Is this waste a characteristic hazardous waste?	Yes	(No)
If yes, list waste codes:		

List the name and title of the person making this determination: Andrea Jones, EHS Manager

Date of this determination: 8-5-2016

CAUTION! THIS IS A FLAMMABLE/COMBUSTIBLE MATERIAL-SECURE ALL IGNITION SOURCES USE *USE EXPLOSION PROOF LIGHTING WHILE CLEANING THE INTERIOR. *UNPLUG ALL ELECTRICAL EQUIPMENT WHILE PLACING IN OR REMOVING FROM TANK

****See the last page of this procedure for steaming limitations for lined cars****

Instruction: Follow each step, read the instruction, complete the task, then initial and date the steps when the step is complete. ***NOTE: YOU MUST BE QUALIFIED BY FUNCTION SPECIFIC TRAINING TO PERFORM THIS CLEANING PROCEDURE.***

Team Member(s) Name(s)/Clock #(s):_____

Step	Instruction	Initial/Date
1	Prior to work commencing, review; the commodity SDS, the tank car interior cleanliness inspection form (C-022-1) and car cleaning PPE procedure (C-032. Discuss responsibilities related to confined space entry program **(CSE Procedure) GBWS-001.0**, including entrant and attendant responsibilities.	
2	Check for safety and personal protective equipment (PPE) that is required. Check car to see if product stenciling/placards matches SDS commodity description. If not stop immediately and contact your supervisor for resolution. Do not proceed any further until directed to do so.	
3	Apply ground wire to the tank car body. Approach car with caution and gauge pressure thru the vapor valve only. Record/report pressure readings to your supervisor. Record pressure reading: _____	
4	Inspect all hoses, hose fittings and gaskets, PPE and tooling for a serviceable condition prior to use. **ONLY VENT PRODUCT PRESSURE ACCORDING TO YOUR AIR PERMIT'S REQUIREMENTS.** If required, attach hose to vapor valve on car and to flare line. Start flare according to the flare operating procedure. Open flare line valve first, open vapor valve on car. Vent thru flare until zero pressure. Close flare line valve.	

5	Once car is at zero pressure, don the necessary PPE to open the manway (MW) to inspect interior for excessive commodity. Use spark proof tools to open the MW. If a light is necessary for this inspection, use an explosion proof light or an intrinsically safe flashlight with LED, HID or halogen bulbs. Be careful not to allow the MW gasket to fall into the car. Once inspected, close the manway tightly and report your findings to your supervisor.	
6	If excessive liquid commodity heel is present, use procedure C-012 for the Safe Handling and Transfer of Combustible and Flammable Liquids to 55 gal Drums. If material is to be disposed of as a waste, ensure the proper classification, labeling and handling of the containerized waste is observed.	
7	Ensure that the vapor valve on the car is hooked to the flare line, the flare line valve, and the vapor valve on the car are closed. Attach a steam hose to the liquid valve on the car. Open liquid valve on car first, open steam supply valve. Build 5 psig of steam pressure, close steam supply valve first, and then close that liquid valve. Open flare line valve, then open the vapor valve on car. Vent car's internal pressure to the flare. Repeat the portion of this step from the "build 5 psig of steam pressure" and vent to the flare.	
8	Remove the steam hose from the liquid valve. Apply a tee fitting to the end of the steam hose. Open MW and place the steam hose approximately 2/3 down from the top of the tank. Close the MW cover onto two raised eyebolts to prevent cover from hitting the steam hose. Open the BOV slowly to control any hot steam condensate accumulated in the car to drain to the sump. Open the vapor and liquid valves first, open the steam supply line slowly. Steam the car for approximately two hours. **CAUTION: DO NOT CLOSE ALL OPENINGS ON A HOT TANK CAR AND ALLOW THE TANK TO COOL. THE CAR CAN IMPLODE IF IT IS NOT ALLOWED TO VENT INTERNAL HEAT.**	
9	Close steam supply line valve. Remove steam hose from the MW. If the commodity is not water soluble, insert the wash-head fixture into the MW, secure fixture in place. For commodities that are not water soluble; begin filling the caustic wash water and clear water rinse tanks with water. Don PPE required for handling Group 5 materials according to C-032 before handling caustic. To control the chemical reaction, carefully and slowly add caustic (sodium hydroxide flakes or beads) at a ratio of approximately 5 lbs to 50 gallons of water. Ensure water level is low when adding caustic. Apply steam heat to the caustic wash tank. Run wash-head for approximately one hour with a heated caustic solution, allow tank to drain. Align rinse tank valve to run cool water thru wash-head for 30 minutes. Insulated cars will likely need to remain open overnight to cool for entry. No car may be entered if interior is ≥120°F.	
10	Inspect tank interior from the MW. If a light is necessary, use an explosion proof light or an intrinsically safe flashlight. Entry test tank per **GBWS-001.0** at the top, middle, and lower elevations in the tank. If tank interior does not have the	

	acceptable test readings, ventilate the interior with a blower or compressed air tee fitting/hose. Stop periodically to entry test tank and repeat the sequence of this step until all required readings pass entry test requirements.	
11	Consult C-022-1 to determine if toxicity testing of the interior atmosphere is required. If required, GCD tubes will already be obtained during the inbound inspection process. If testing is required, the acceptable test reading is noted on C-022-1. Enter test reading on C-022-1. If toxicity testing results are greater than specified, consult your supervisor for the re-cleaning of the tank. A PID meter may be used in lieu of GCD tubes.	
12	Once the pre-entry tests and toxicity testing results are acceptable, entry permits are complete, don appropriate PPE, lower an unplugged explosion proof light into the car or use an intrinsically safe flashlight to enter tank for inspection **while providing a minimum of 1,500 cfm continuous ventilation.**	
13	Inspect for tank cleanliness, spot clean and dry areas as necessary. Green tag the car clean per **GBWS-001.0.**	
14	Inspect valves and fittings, lining (if equipped), tank shell, pipes and bracket condition and cleanliness of interior to AAR and customer requirements, and advise your supervisor of any defects. If the scope of work includes a change in commodity service, valves will require R-R & disassembly to be rebuilt and valve cavities thoroughly cleaned.	
15	If included in the scope of work; after cleaned, dried, inspected, and all required interior repairs are complete, reapply valves and fittings, replacing gaskets according to the car owner approved materials and methods. Leak test all joints using approved procedures and personnel.	
16	Sign off cleaning sheet, note material used. Write supplements as necessary.	
17	Dispose of or clean and decontaminate PPE as required.	

Steaming Limitations for Lined Cars

CAUTION: Cleaning processes can damage organic tank linings depending on the specific process. It is a good policy to check with the specific coating manufacturer before initiating a cleaning process on an organic lining that includes steam and or chemicals. The following is offered regarding steaming of Plasite linings at 15 psig (250°F).

- The following Plasite systems should be limited to no more than 15 minutes of 15 psig (250°F) steam. 850, 4006, 4006HAR, 4007, 4100, 4110, 4300, 4310, 4500, 4500S, 4550, 4550S, 7122, 7122L,

7122LAR, 7122TFE, 7133, 7133HS, 9122, 9122HAR, 9122TFE, 9060, 9060HAR, 9062, 9081, 9081HAR, 9083, 9085, 9122, 9122HAR, 9122TFE, 9133, 9145, 9145TFE, 9146, 9146TFE, 9571, 9573

- The following Plasite systems should be limited to no more than 30 minutes of 15 psig (250°F) steam. 9500, 9500HAR, 9570, 9570HAR, 9051, 9052, 9053
- The following Plasite systems should be limited to 8 hours at 15 psig (250°F) steam. 859, 7156, 7156HAR, 7159, 7159HAR
- The following Plasite systems are resistant to a continuous 15 psig (250°F) steam. 3066, 3070, 3070L

LOG OF REVISIONS

REVISION LEVEL	REV. DATE	REV. SECTION	CHANGE MADE
A	9.15.14	ALL	Added toxicity testing in Step 12, reformatted to GBW requirements
B	11.6.14	Text	Added limitations for steaming of lined cars
C	5.1.15	Steps 1, 10, 12 and 13	Corrected references, added ventilation requirements of GBWS-001.0

SAFETY DATA SHEET

Ethanol – Pacific Ethanol Pekin

Section 1. Identification

GHS product identifier	Anhydrous Ethyl Alcohol SDA-29-1
Chemical name	Ethanol
Other means of identification	Ethyl alcohol; Denatured Alcohol; ALCOHOL; Ethyl alcohol (Ethanol)
Product use	
Synonym	Ethyl alcohol; Denatured Alcohol; ALCOHOL; Ethyl alcohol (Ethanol)
SDS #	
Supplier's details	Pacific Ethanol Pekin 1300 South Second Street Pekin, IL 61554 1-309-347-3200
Emergency telephone number (with hours of operation)	Chemtrec 1-800-424-9300

Section 2. Hazards identification

OSHA/HCS status	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	FLAMMABLE LIQUIDS - Category 2

GHS label elements

Hazard pictograms

Signal word	Danger
Hazard statements	Highly flammable liquid and vapor. May displace oxygen and cause rapid suffocation.

Precautionary statements

General	Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention	Wear protective gloves. Wear eye or face protection. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use and store only outdoors or in a well-ventilated place.
Response	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
Storage	Store in a well-ventilated place. Keep cool.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified	None known.

Section 3. Composition/information on ingredients

Substance/mixture	Substance
Chemical name	Ethanol
Other means of identification	Ethyl alcohol; Denatured Alcohol; ALCOHOL; Ethyl alcohol (Ethanol)

CAS number/other identifiers

CAS number	64-17-5
Product code	94006

Ingredient name	%	CAS number
Ethanol	95-99.99	64-17-5

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Frostbite	Try to warm up the frozen tissues and seek medical attention.
Ingestion	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	No specific data.

Section 4. First aid measures

Inhalation	No specific data.
Skin contact	No specific data.
Ingestion	No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Use dry chemical, CO_2, water spray (fog) or foam.
Unsuitable extinguishing media	Do not use water jet.
Specific hazards arising from the chemical	Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
Hazardous thermal decomposition products	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Special protective actions for fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non--emergency personnel".

Environmental precautions Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental

pollution (sewers, waterways, soil or air).

Date of Issue/Date of revision : *01/27/2015*

Section 6. Accidental release measures

Methods and materials for containment and cleaning up

Small release	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large release	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Ethanol	ACGIH TLV (United States, 3/2012). STEL: 1000 ppm 15 minutes. OSHA PEL 1989 (United States, 3/1989). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours. NIOSH REL (United States, 1/2013). TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.

Section 8. Exposure controls/personal protection

	OSHA PEL (United States, 6/2010). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.

Appropriate engineering controls	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Body protection	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance	
Physical state	Liquid. [CLEAR, COLORLESS LIQUID WITH A WEAK, ETHEREAL, VINOUS ODOR]
Color	Colorless. Clear.
Molecular weight	
Molecular formula	
Boiling/condensation point	78°C

Section 9. Physical and chemical properties

Melting/freezing point	-114°C
Critical temperature	Not available.
Odor	Characteristic.
Odor threshold	Not available.
pH	Not available.
Flash point	Closed cup: 57°F
Burning time	Not applicable.
Burning rate	Not applicable.
Evaporation rate	2.1 (Butyl Acetate = 1)
Flammability (solid, gas)	Not available.
Lower and upper explosive (flammable) limits	Lower: 3.3% Upper: 19%
Vapor pressure	(mm Hg.)
Vapor density	1.6 (Air = 1)
Solubility in water	>10% by weight at 20°C
Auto-ignition temperature	685°F
SADT	
Viscosity	

Section 10. Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Incompatibility with various substances	Highly reactive or incompatible with the following materials: oxidizing materials and alkalis.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure	Not available.

Potential acute health effects

Eye contact	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	No specific data.
Inhalation	No specific data.
Skin contact	No specific data.
Ingestion	No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	Potential delayed effects Long term exposure

Ethanol

Section 11. Toxicological information

Not available.

Not available.

Section 11. Toxicological information

Potential immediate effects	Not available.
Potential delayed effects	Not available.

Potential chronic health effects

Notavailable.

General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Mobility in soil

Soil/water partition coefficient (Koc)	Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere

Section 13. Disposal considerations

inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT	TDG
UN number	UN1170	UN1170
UN proper shipping name	ETHANOL OR ETHYL ALCOHOL OR ETHANOL SOLUTIONS OR ETHYL ALCOHOL SOLUTIONS	ETHANOL MORE THAN 24 PER CENT ETHANOL, BY VOLUME; ETHANOL SOLUTION MORE THAN 24 PER CENT ETHANOL, BY VOLUME; ETHYL ALCOHOL MORE THAN 24 PER CENT ETHANOL, BY VOLUME; OR ETHYL ALCOHOL SOLUTION MORE THAN 24 PER CENT ETHANOL, BY VOLUME
Transport hazard class(es)	3	3
Packing group	II	II
Environment	No.	No.
Additional information	Limited quantity: Yes. Packaging instruction: Passenger aircraft Quantity limitation: 5 L Cargo aircraft Quantity limitation: 60 L	Exposure limit and Limited quantity index: 5

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Special precautions for user — Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code — Not available.

Section 15. Regulatory information

U.S. Federal regulations	TSCA 8(a) CDR Exempt/Partial exemption: Not determined United States inventory (TSCA 8b): This material is listed or exempted.
Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)	Not listed
Clean Air Act Section 602 Class ISubstances	Not listed
Clean Air Act Section 602 Class II Substances	Not listed
DEA List IChemicals (Precursor Chemicals)	Not listed
DEA List II Chemicals (Essential Chemicals)	Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ	Not applicable.

SARA 311/312

Classification	Fire hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
ethanol	95-99.99	Yes.	No.	No.	No.	No.

International regulations

International lists	Australia inventory (AICS): This material is listed or exempted. China inventory (IECSC): This material is listed or exempted. Japan inventory: This material is listed or exempted. Korea inventory: This material is listed or exempted. Malaysia Inventory (EHS Register): Not determined. New Zealand Inventory of Chemicals (NZIoC): This material is listed or exempted. Philippines inventory (PICCS): This material is listed or exempted. Taiwan inventory (CSNN): Not determined.
Chemical Weapons Convention List Schedule I Chemicals	Not listed
Chemical Weapons Convention List Schedule II Chemicals	Not listed

Section 15. Regulatory information

Chemical Weapons Convention List Schedule IIIChemicals : Not listed

Canada

WHMIS (Canada)

Class 8-2: Flammable liquid
Class D-28: Material causing other toxic effects (Toxic).

CEPA Toxic substances: This material is not listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.

Section 16. Other information

Canada Label requirements : Class 8-2: Flammable liquid
Class D-28: Material causing other toxic effects {Toxic).

Hazardous Material Information System (U.S.A.)

Health *	2
Flammability	3
Physical hazards	0

Caution! :ffMIS® ratings are based ,on a -0-4 rating scale, with O representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 120Q, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program:HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The .customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications In NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Section 16. Other information

Key to abbreviations

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United NationsACGIH - American Conference of Governmental Industrial Hygienists
AIHA - American Industrial Hygiene Association
CAS - Chemical Abstract Services
CEPA - Canadian Environmental Protection Act
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act (EPA)
CFR - United States Code of Federal Regulations
CPR - Controlled Products Regulations
DSL - Domestic Substances List
GWP - Global Warming Potential
IARC - International Agency for Research on Cancer
ICAO - International Civil Aviation Organisation
Inh - Inhalation
LC - Lethal concentration
LD - Lethal dosage
NDSL - Non-Domestic Substances List
NIOSH - National Institute for Occupational Safety and Health
TOG - Canadian Transportation of Dangerous Goods Act and Regulations
TLV - Threshold Limit Value
TSCA - Toxic Substances Control Act
WEEL - Workplace Environmental Exposure Level
WHMIS - Canadian Workplace Hazardous Material Information System

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WASTE MATERIAL PROFILE SHEET

Profile No. 1149999

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # *KSD043936277* GENERATOR NAME: *GBW Railcar Services*

GENERATOR CODE (Assigned by Clean Harbors) *GR31364* CITY *Atchison* STATE/PROVINCE *KS* ZIP/POSTAL CODE *66002*

ADDRESS *15624 258th Rd*

PHONE: (866) 785-4082

CUSTOMER CODE (Assigned by Clean Harbors) *GR31364* CUSTOMER NAME: *GBW Railcar Services*

ADDRESS *15624 258th Rd* CITY *Atchison* STATE/PROVINCE *KS* ZIP/POSTAL CODE *66002*

B. WASTE DESCRIPTION

WASTE DESCRIPTION: *WASH WATER*

PROCESS GENERATING WASTE: CLEAN OUT OF RAILCAR

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? No

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE
- SOLID WITHOUT FREE LIQUID
- POWDER
- MONOLITHIC SOLID
- [x] LIQUID WITH NO SOLIDS
- LIQUID/SOLID MIXTURE
- % FREE LIQUID
- % SETTLED SOLID
- % TOTAL SUSPENDED SOLID
- SLUDGE
- GAS/AEROSOL

NUMBER OF PHASES/LAYERS
[x] 1 2 3

% BY VOLUME (Approx.)
TOP *0.00*
MIDDLE *0.00*
BOTTOM *0.00*

VISCOSITY (if liquid present)
- [x] 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR
BLACK

ODOR
- NONE
- [x] MILD
- STRONG

Describe:

BOILING POINT °F (°C)
- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- [x] >= 130 (>54)

MELTING POINT °F (°C)
- < 140 (<60)
- 140-200 (60-93)
- > 200 (>93)

TOTAL ORGANIC CARBON
- <= 1%
- 1-9%
- [x] >= 10%

FLASH POINT °F (°C)
- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- [x] > 200 (>93)

pH
- <= 2
- 2.1 - 6.9
- [x] 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY
- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- [x] 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- > 1.2 (e.g. Methylene Chloride)

ASH
- < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- [x] Unknown

BTU/LB (MJ/kg)
- [x] < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
LPG GASES (INERT)	1.0000000	--	5.0000000	%
WATER	100.0000000	--	100.0000000	%

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES NO

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES [x] NO

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES [x] NO

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. *G13* SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. *W101*

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E. CONSTITUENTS

Are these values based on testing or knowledge? Knowledge ☑ Testing

If constituent concentrations are based on analytical testing, analysis must be provided. Please attach document(s) using the link on the Submit tab.

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0				☑
D005	BARIUM	100.0				☑
D006	CADMIUM	1.0				☑
D007	CHROMIUM	5.0				☑
D008	LEAD	5.0				☑
D009	MERCURY	0.2				☑
D010	SELENIUM	1.0				☑
D011	SILVER	5.0				☑

	VOLATILE COMPOUNDS	
D018	BENZENE	0.5
D019	CARBON TETRACHLORIDE	0.5
D021	CHLOROBENZENE	100.0
D022	CHLOROFORM	6.0
D028	1,2-DICHLOROETHANE	0.5
D029	1,1-DICHLOROETHYLENE	0.7
D035	METHYL ETHYL KETONE	200.0
D039	TETRACHLOROETHYLENE	0.7
D040	TRICHLOROETHYLENE	0.5
D043	VINYL CHLORIDE	0.2
	SEMI-VOLATILE COMPOUNDS	
D023	o-CRESOL	200.0
D024	m-CRESOL	200.0
D025	p-CRESOL	200.0
D026	CRESOL (TOTAL)	200.0
D027	1,4-DICHLOROBENZENE	7.5
D030	2,4-DINITROTOLUENE	0.13
D032	HEXACHLOROBENZENE	0.13
D033	HEXACHLOROBUTADIENE	0.5
D034	HEXACHLOROETHANE	3.0
D036	NITROBENZENE	2.0
D037	PENTACHLOROPHENOL	100.0
D038	PYRIDINE	5.0
D041	2,4,5-TRICHLOROPHENOL	400.0
D042	2,4,6-TRICHLOROPHENOL	2.0
	PESTICIDES AND HERBICIDES	
D012	ENDRIN	0.02
D013	LINDANE	0.4
D014	METHOXYCHLOR	10.0
D015	TOXAPHENE	0.5
D016	2,4-D	10.0
D017	2,4,5-TP (SILVEX)	1.0
D020	CHLORDANE	0.03
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM			☑
SODIUM			☑
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE			☑

HOCs

☑ NONE
< 1000 PPM
>= 1000 PPM

PCBs

☑ NONE
< 50 PPM
>=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCES	EXPLOSIVE	FUMING	OSHA REGULATED CARCINOGENS
POLYMERIZABLE	RADIOACTIVE	REACTIVE MATERIAL	☑ NONE OF THE ABOVE

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F. REGULATORY STATUS

YES ☑ NO USEPA HAZARDOUS WASTE?

YES ☑ NO DO ANY STATE WASTE CODES APPLY?

Texas Waste Code

YES ☑ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

YES ☑ NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: *Not subject to LDR*
VARIANCE INFO:

YES ☑ NO IS THIS A UNIVERSAL WASTE?

YES ☑ NO

YES NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES ☑ NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

YES ☑ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES ☑ NO

Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

YES NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

NON-REGULATED LIQUID

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ONE TIME ☑ WEEKLY MONTHLY QUARTERLY YEARLY OTHER

CONTAINERIZED	☑ BULK LIQUID	BULK SOLID
0-0 CONTAINERS/SHIPMENT	GALLONS/SHIPMENT: *2500.00 Min -2500.00 Max* GAL.	SHIPMENT UOM: TON YARD
STORAGE CAPACITY:		TONS/YARDS/SHIPMENT: *0 Min - 0 Max*
CONTAINER TYPE:		
PORTABLE TOTE TANK BOX|CARTON|CASE		
CUBIC YARD BOX DRUM		
OTHER: DRUM SIZE:		

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:
SEEKING SKVS APPROVAL

GENERATOR'S CERTIFICATION

I certify that I am authorized to execute this document as an authorized agent. I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge.I also certify that any samples submitted are representative of the actual waste.If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
	Andrea Jones	EHS Manager	2/23/2016

GBW RAILCAR SERVICES, LLC

Railcar Wastewater Cleaning Log

Title: Railcar Wastewater Cleaning Log	**Doc. No:** RWWCL-1	**Rev. No:** 3
Location: GBW – Atchison	**Issue Date:** 29 Aug. 2005	**Rev. Date:** 3 Nov. 2014

Car Initial and Number	Commodity	Approximate Gallons or No. of 55 Gallon Drums Removed	Operator	Date Cleaned
CBTX 741052	CRUDE oil	240gal WATER	DEWAYNE MARTIN	10/30/14
CBTX 728007	CRUDE oil	300gal water	KEEGAN DELK TREVOR SIARD	10/30/14
TCMX 450220	CORN MEAL	200 gal water	Andrew Valentine	10/30/14
CBTX 728007	Crude oil	340 gal water	DEWAYNE MARTIN	10/31/14
DBUX 301111	Ethanol	180 gal water	DEWAYNE MARTIN	10/31/14
CITX 221110	Ethanol	200gal water	Shawn Adams	10/31/14
DBUX 207671	crude oil	300gal water	KEEGAN DELK Andrew Valentine	10/31/14
CBTX 735211	CRUDE oil	480gal water	DEWAYNE MARTIN	11/3/14

GBW Rail Services Wastewater Generator Site Name: GBW - Atchison
GBW Wastewater Discharge Permit Number: HN-1176 Expires 31 May 2016
GBW EPA Permit Number: KSD043936277

Wastewater Disposal Service: Reddi Services
Disposal Service Permit Number: HD1561-14 Expires Mar. 4, 2015

Wastewater Disposal Site: Wyandotte County Water Pollution Control Division

Disposal Service Representative's Signature of Receipt: _____

Date Wastewater Picked Up: _____

Reddi Services DBA Reddi Root'r
Liquid Waste Disposal Manifest

To be completed by Generator:

Generator: GISW Phone #:

Location Address: 15624 258th St

Mailing Address:

City: Cummings State: KS Zip Code: 66016

Contact: Waste Disposal Approval #:

Date Pumped: 11-3-14 Time Pumped: Est. Qty. of Waste (gals.): 3,000

Grease Trap: Mud Trap: Septic Waste:

Other: Wastewater (please specify)

Certification Statement

As an authorized representative of the above named Generator, I certify under penalty of law that the above information is true and correct and that the waste material to be collected and disposed of by Reddi Services pursuant to this manifest is all liquid waste (including recyclable materials) generated by Generator and that this waste material specifically excludes any radioactive, volatile, corrosive, highly flammable, explosive biomedical, infectious, biohazardous, toxic or hazardous material as defined by applicable federal, state, provincial or local laws or regulations.

Authorized Representative's Signature: Date: 11/3/14

To be completed by Transporter:

Transporting Firm Name:

I certify under penalty of law the above information is true and correct to the best of my knowledge and further certify that this truck contains the materials listed above in the Generator Certification and does not contain HAZARDOUS WASTE as defined by applicable federal, state, provincial or local laws or regulations.

Driver's Name (print): Brandon Robinson Signature:

To be completed by Reddi Services ONLY:

Waste Disposed at: Kaw Point

Employee's Signature:

Total Gallons: Net Weight:

Date Dumped: 11-3-14 Time Dumped:

Comments:

Generator (White) Reddi Services (Canary) Transporter (Pink)

REDDISERVICES

DBA REDDI ROOT'R

Remit payment to:
4011 Bonner Industrial Dr.
Shawnee, KS 66226
(913) 328.5595

Invoice 1418154
Date 11-3-14
Acct.

SERVICE LOCATION	BILL TO
Name G13W	Name
Address 15624 258th St	Address
City Cummings State KS Zip 66016	City State Zip
Phone( ) ( )	Phone( ) ( )

MANIFEST NO. PROFILE NO. P.O. # 161722

DESCRIPTION OF WORK PERFORMED: Pumped wash pit

	DESCRIPTION	GALLONS	LABOR	DISPOSAL	PRICE	
	SEPTIC TANK					
	CESSPOOL					
	RISERS					
	INSPECTION					
	BACTERIA TREATMENT					
	GREASE TRAP					
1	SAND TRAP/CARWASH	3,000				
	ELECTRONIC LOCATING					
	HYDRO JET					
	OIL SEPARATOR					

WORK AUTHORIZATION SIGNATURE. PAYMENT DUE UPON COMPLETION OF WORK.

Authorization to proceed with above Diagnosis/solution - I, the undersigned, am owner/authorized representative/tenant of the premises at which the work mentioned above is to be done. I hereby authorize you to perform said work, and to use such labor and materials as you deem advisable. A monthly service charge of 1 1/2% will be added after 10 days on all unpaid balances. I agree to pay reasonable attorney's fees and court costs in the event of a legal action or reasonable bank costs if any check fails to clear. I have read, agree to, and have received a copy of the contract. I understand any price is not including tax. All parts will be removed from premises and discarded unless otherwise specified herein.

Any alteration or deviation from above specifications will be an extra charge over and above estimate.

I hereby authorize you to proceed with the above work at the rate of

$ Authorized Signature X

Job Start Time	Job Completion Time
2:20 p.m.	

☐ Check ☐ Cash ☐ Credit Card No. Expiration Date

Authorization Code	Driver's License #	Exp. Date

I hereby state that the above work has been installed in a workmanlike manner.

11-3-14 X
Date Service Technician Signature

Acceptance of work performed - I find the service and materials rendered and installed in connection with the above work mentioned to have been completed in a satisfactory manner. I agree that the amount set forth on this contract in the space labeled "Total Charge" to be the total and complete charge. I agree to pay reasonable attorney's fees and court costs in the event of legal action. A monthly service charge of 1 1/2% will be added after 10 days on all unpaid balances.

Acceptance Signature X

SUB TOTAL		
MISC. SUPPLY CHARGE		
TAX		
FUEL SURCHARGE		
TOTAL CHARGE	440	00

PLUMBING • DRAIN CLEANING • HEATING • AIR CONDITIONING • WASTE REMOVAL K261

22-55

HERITAGE - CRYSTAL CLEAN - BILL OF LADING

HCC Use Loc: KANSAS CITY Route: 2 Page 1 of 1
Doc #: 7269 - PB:130228 WO #: 7XY78

Shipper's Name And Mailing Address
GBW RAILCAR SERVICES
P.O. BOX 436
ATCHISON, KS 66002

Physical Address
GBW RAILCAR SERVICES
15624 258TH RD
CUMMINGS, KS 66016

Generator EPA ID KSD043936277
Generator State ID

Generator Phone: 866-785-4082

Transporter 1 Company Name	Transp 1 EPA Id	Transp 1 State Id	Transp 1 Phone
HERITAGE-CRYSTAL CLEAN, LLC	ILR000130062		(847)836-5670

Transporter 2 Company Name	Transp 2 EPA Id	Transp 2 State Id	Transp 2 Phone
NEIBR	NJD984868406		317-222-4340

Transporter 3 Company Name	Transp 3 EPA Id	Transp 3 State Id	Transp 3 Phone

Receiving Facility	Facility EPA Id	Facility State Id	Facility Phone
HERITAGE-CRYSTAL CLEAN, LLC. 1560 WEST RAYMOND ST INDIANAPOLIS, IN 46221	ILR000130062		

24Hr Emergency Pho
(800)424-9300

	HM	Waste Shipping Description and DOT Description (as applicable)	Container No.	Container Type	Total Qty	Unit Wt/vol
A	X	NA1993, COMBUSTIBLE LIQUID, N.O.S., PGIII, (ACETONE / TOLUENE) ERG#128	011	DM	4675	P
B		NON-DOT/RCRA REGULATED, (WASH WATER)	009	DM	3825	P
C	X	NA1993, DIESEL FUEL, 3, PGIII, ERG#128	011	DM	4675	P
D						

Special Handling Instructions, Additional Information and Handling Codes (as Applicable)
A) CC: 284351-17 TSD: 133305-17 1011 (4) C) CC: 284351-8 TSD: 133305-8 1000 (7)
B) CC: 284351-15 TSD: 8405 PLEASE RETURN B.O.L. TO CUSTOMER

SHIPPERS CERTIFICATION: I certify that the material(s) described above on this bill of lading are fully and accurately described and are not subject to full regulation under the Resource Conservation and Recovery Act except 261.5 as related to CESQGs.

X Andrea Ans — Printed/Typed Name — X — Signature — 11-10-15 — Date

Transporter 1 Acknowledgement of Receipt Materials
MATT RINGGOLD — Printed/Typed Name — Signature — 11-10-15 — Date

Transporter 2 Acknowledgement of Receipt Materials
MILLARD HARRIS JR — Printed/Typed Name — Signature — 11/18/15 — Date

Transporter 3 Acknowledgement of Receipt Materials
Printed/Typed Name — Signature — Date

Additional Description / Discrepancies

Facility Owner or Operator: Certification of receipt of waste materials covered by this bill of lading.
Dorothy Curtis — Printed/Typed Name — Dorothy Curtis — Signature — 11/25/15 — Date

Attachment 4 Page 1 of 4

ORIGINAL - RETURN TO GENERATOR

11-10-15

TOLUENE / STEAMWATER

736162- ~~IIII~~

736145- ~~IIII~~ I

CONDENSATE-SWEET

731481- ~~IIII~~

731336- ~~IIII~~ I

NON-HAZ WASH WATER

725818- ~~IIII~~

726107- IIII

Crystal Clean

WORK ORDER

HERITAGE-CRYSTAL CLEAN, LLC
(877) 938-7948

CREDIT ALERT

EMP ID #	SVC WK	WORK ORDER #	SVC REQ	AGRMT #	PURCHASE ORDER #	PAGE
	45	00 007XY73	157581	75 10		1 of 1

CCMS CUST. ID #	ROUTE	FEDERAL EPA ID #
101925	KANSAS CITY R ROUTE 2	KSD043952777

COMMENTS	GEN. STATUS	STATE EPA ID #
EMERGENC # 800-424-9300 DRIVER MUST CALL DAY BEFORE SERVICE. GET EPA# EACH SVC FROM LISA 12/6/10 RB	LQG	

CUSTOMER/SHIPPER: GEW RAILCAR SERVICES
15824 25TH RD
CUMMINGS, KS 66016

Contact Name: DON LASSEN (866)735-4082

DESTINATION: HERITAGE-CRYSTAL CLEAN, LLC
30 FUNSTON ROAD
KANSAS CITY, KS 66115

Phone Number: (913)233-2651

CARRIER: HERITAGE-CRYSTAL CLEAN, LLC **EPA ID #:** ILR 000 130 062 **Phone Number:** (877) 938-7948

BILL OF LADING

16 GAL. DRUMS	30 GAL. DRUMS	55 GAL. DRUMS	PROPER SHIPPING NAME	TOTAL	UNITS

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transport according to the applicable regulations of the Department of Transportation, as required. I also certify that neither hazardous waste, nor PCBs have been mixed with the used oil and/or parts cleaner solvent (if applicable).

Per _____
Customer/Shipper Date

Per _____
HCC/Carrier Date

SUMMARY OF CHARGES

TODAY'S SERVICE

WS #	PROD. CODE	DESCRIPTION	RTD. GALS.	UNIT	SI	NEXT SVC.	LOCATION COMMENTS	UNIT PRICE	QTY.	TOTAL CHARGE
284351										
	17	10.10 SAID FUEL		NONE			TOLUENE/WASH WATER			
	17A	ENERGY SURCHARGE		NONE						
-8	1000A	55G SUPPLIES UNIFORM					CONDENSATE SWEET WATER	163.00 (11)		1793.00
	6MA	55G WASTE DISCHARGE					HIGH WATER	140.00 (11)		1540.00
-15	10MA	55G AQUEOUS ENERGY REC					WASH WATER	206.05 (9)		1845.45
	1252	55G DRUM OPEN TOP						40.00 (55)		2200.00
										$0.00
								TAX		$0.00
								SERVICE SUBTOT		

PRODUCTS

PRODUCT DESCRIPTION:	UNIT PRICE	QTY.	CHARGE

PRODUCT SALES TAX

SUBTOTAL PRODUCT & TAX

MACHINE INSPECTION		
Cleanliness	G	P
Lamp Assembly	G	P
Drum Condition	G	P
Fusible Link Installed	G	P
Lid Unobstructed	G	P
Properly Grounded	G	P
Local Phone # affixed	G	P
Decals in Place	G	P

SERVICE/PRODUCTS CHARGE SUMMARY

CUSTOMER HEREBY VERIFIES THAT THE ABOVE SERVICES WERE PERFORMED AND THAT SAID SERVICES AND THE CHARGES THEREFORE ARE HEREBY ACCEPTED. CUSTOMER ALSO HEREBY REAFFIRMS THE ACCURACY AND COMPLETENESS OF ALL INFORMATION CONTAINED IN THIS WORK ORDER AND ALL DOCUMENTATION PREVIOUSLY SUBMITTED TO HCC. THIS WORK ORDER IS DEEMED PART OF THE SERVICE AGREEMENT BETWEEN HERITAGE-CRYSTAL CLEAN, LLC AND THE CERTIFICATIONS CONTAINED THEREIN CONCERNING THE MATERIALS TO BE HANDLED AND THE SERVICES TO BE PROVIDED ARE INCORPORATED HEREIN BY REFERENCE AND DEEMED PART HEREOF AND SAID CERTIFICATIONS ARE DEEMED REMADE FOR THE SERVICES COVERED BY THIS WORK ORDER.

PER _____ *DATE* _____

TODAY'S SERVICE	1152.41
PRODUCT & TAX	
TOTAL AMOUNT DUE	
TOTAL REMITTANCE	
CHECK NUMBER	

HERITAGE - CRYSTAL CLEAN - BILL OF LADING

HCC Use: Loc: KANSAS CITY | Route: 2 | Page 1 of 1
Doc #: | PB:130128 | MD #: 7XY78

Shipper's Name And Mailing Address
GBW RAILCAR SERVICES
P.O. BOX 436
ATCHISON, KS 66002

Physical Address
GBW RAILCAR SERVICES
15624 258TH RD
CUMMINGS, KS 66016

Generator EPA ID
KSD043936877
Generator State ID:

Generator Phone: 866-785-4082

Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC | Transp 1 EPA Id: ILR000130062 | Transp 1 State Id: | Transp 1 Phone: (847)836-5670
Transporter 2 Company Name: | Transp 2 EPA Id: | Transp 2 State Id: | Transp 2 Phone:
Transporter 3 Company Name: | Transp 3 EPA Id: | Transp 3 State Id: | Transp 3 Phone:

Receiving Facility
HERITAGE-CRYSTAL CLEAN, LLC.
1560 WEST RAYMOND ST
INDIANAPOLIS, IN 46221

Facility EPA Id: ILR000130062 | Facility State Id: | Facility Phone:
24Hr Emergency Phone: (800)424-9300

	HM	Waste Shipping Description and NRT Description (as applicable)	Container No.	Type	Total Qty	Unit Wt/Vol
A	X	NA1993, COMBUSTIBLE LIQUID, N.O.S., PGIII, (ACETONE / TOLUENE) ERG# 128	011	DM	4675	P
B		NON-DOT/RCRA REGULATED, (WASH WATER)	009	DM	3825	P
C	X	NA1993, DIESEL FUEL, 3, PGIII, ERG# 128	011	DM	4675	P
D						

Special Handling Instructions, Additional Information and Handling Codes (as Applicable)
A) CC: 284351-17 TSD: 133305-17 C) CC: 284351-8 TSD: 133305-8
B) CC: 284351-15 TSD: 8405

SHIPPERS CERTIFICATION: I certify that the material(s) described above on this bill of lading are fully and accurately described and are not subject to full regulation under the Resource Conservation and Recovery Act except 261.5 as related to CESQGs.

X Andrew Ruiz — Printed/Typed Name | X [signature] — Signature | Date: 11-10-15

Transporter 1 Acknowledgement of Receipt Materials
MATT RINGGOLD — Printed/Typed Name | Matt Ringgold — Signature | Date: 11-10-15

Transporter 2 Acknowledgement of Receipt Materials
Printed/Typed Name | Signature | Date

Transporter 3 Acknowledgement of Receipt Materials
Printed/Typed Name | Signature | Date

Additional Description / Discrepancies

Facility Owner or Operator: Certification of receipt of waste materials covered by this bill of lading.
Printed/Typed Name | Signature | Date

GENERATOR'S COPY

ENVIRONMENTAL SERVICES

CERTIFICATE OF RECYCLING / DISPOSAL

This certifies the waste material associated with Manifest # 011242538 6BF has been received and processed for the proper recycling/disposal method(s) as defined by local, state, and federal regulations.

FACILITY NAME:	**Petro-Chem Processing Group, LLC**
ADDRESS:	**421 Lycaste Street** **Detroit, MI 48214**
EPA ID NUMBER:	**MID 980615298**
PHONE NUMBER:	**(313) 824-5840**

SIGNATURE: A. Jabalee

TITLE: PSC Representative

DATE: 10/14/14

Please print or type. (Form designed for use on e te (12-p

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD 043936277
2. Page 1 of 2
3. Emergency Response Phone
4. Manifest Tracking Number: 00 42 53 4 GBF

GENERATOR

5. Generator's Name and Mailing Address: Greenbrier Rail Services, Hwy 59 West 258th Rd, Atchison, KS 66002

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name: HERITAGE

U S EPA ID Number

7. Transporter 2 Company Name: KOBBIE D WOOD

U.S. EPA ID Number: ALD067138591

8. Designated Facility Name and: PETRO, 421 L[illegible], DETROIT, MI 48214

U.S EPA ID Number

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, 3, PG III, D001 D008		DM	988	G	D001 D008
X	2. RQ, 3, PG II, UN 2		DM	152	G	F003 F005 D001 D007 D008 D035
	3.					
	4.					

14. Special Handling Instructions and Additional Inform: 133305-23, 133305-1

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Don | Signature: [signature] | Month 9 | Day 25 | Year

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jeremy Long | Signature: [signature] | Month 9 | Day 25 | Year 14

Transporter 2 Printed/Typed Name: K Kinge | Signature: K Stringer | Month | Day 2 | Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ■ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H141 | 2. H141 | 3. | 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name | Signature

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)	21. Generator ID Number KSD043936877	22. Page 2	23. Manifest Tracking Number 002425384GBF

24. Generator's Name Greenbriar Rail Services Hwy 59 West 25th Rd Atchison, KS 66002

25. Transporter 3 Company Name NEIER — U.S. EPA ID Number IND078486406

26. Transporter _____ Company Name — U.S. EPA ID Number

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes

32. Special Handling Instructions and Additional Information

GENERATOR

33. Transporter 3 Acknowledgment of Receipt of Materials

Printed/Typed Name KERRY ANDERSON — Signature — Month 10 Day 13 Year 14

34. Transporter _____ Acknowledgment of Receipt of Materials

Printed/Typed Name — Signature — Month — Day — Year

TRANSPORTER

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

DESIGNATED FACILITY

EPA Form 8700-22A (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on e (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator D N ber: 36277
2. Page 1 of
3. Emergency Response Phone: 800-424-9300
4. Manifest Tracking Number: 002425384 GBF

5. Generator's Name and Mailing Address: Services 994 Rd

Generator's Site Address (if different than mailing address)

Generator's Phone

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, INC.

U.S. EPA ID Number: [illegible]

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Fac ity Name and S te A

U.S. EPA ID Number

Facility's Phone.

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN 1993, Waste Flammable Liquids, N.O.S. 3, PG III (MeOH, Ethyl Ketone, Diesel) (F005, D001, D018, D035) ERG# 128		DM		G	F005 D035	D001	D018
X			DM	152	G	F003 D007	F005 D008	D001 D035
	4.							

14. Special Handling Instructions and Additional Information

1.) 13[illegible] 3

2.) 13[illegible] 1

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Don Lessor | Signature: Don Lessor | Month 9 | Day 25 | Year 14

GENERATOR

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name | Signature | Month | Day | Year

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name | Signature | Month

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

Crystal Clean

MANUAL WORK ORDER

HERITAGE-CRYSTAL CLEAN, LLC
(877) 938-7948

EMP ID #	SVC WK	WORK ORDER #	SVC REQ	AGRMT #	PURCHASE ORDER #	PAGE
27409		746640	157381	475910	187326	

CCMS CUST. ID #	ROUTE	FEDERAL EPA ID #
101925		KSD 043936277

GEN. STATUS	STATE EPA ID #	COMMENTS

CCMS WO#:

CUSTOMER/SHIPPER: Greenbrier Rail Services
Highway 59 West 258th Rd
Atchison, KS 66002

Contact Name: Don Larsen

DESTINATION:

Phone Number:

CARRIER: HERITAGE-CRYSTAL CLEAN, LLC **EPA ID #:** ILR 000 130 062 **Phone Number:** (877) 938-7948

BILL OF LADING

16 GAL. DRUMS	30 GAL. DRUMS	55 GAL. DRUMS	PROPER SHIPPING NAME	TOTAL	UNITS

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transport according to the applicable regulations of the Department of Transportation, as required. I also certify that neither hazardous waste, nor PCBs have been mixed with the used oil and/or parts cleaner solvent (if applicable).

Per _____ Customer/Shipper Date

Per _____ 9-25-14 HCC/Carrier Date

SUMMARY OF CHARGES

TODAY'S SERVIC

WS #	PROD. CODE	DESCRIPTION	RTD. GALS.	UNIT	SI	NEXT SVC.	LOCATION COMMENTS	UNIT PRICE	QTY.	TOTAL CHARGE
		~~Diesel Sludge~~								

TAX

SERVICE SUBTOTAL

PRODUCTS

PRODUCT DESCRIPTION:	UNIT PRICE	QTY.	CHARGE

PRODUCT SALES TAX

SUBTOTAL PRODUCT & TAX

MACHINE INSPECTION

Cleanliness	G	P
Lamp Assembly	G	P
Drum Condition	G	P
Fusible Link Installed	G	P
Lid Unobstructed	G	P
Properly Grounded	G	P
Local Phone # affixed	G	P
Decals in Place	G	P

SERVICE/PRODUCTS CHARGE SUMMARY

CUSTOMER HEREBY VERIFIES THAT THE ABOVE SERVICES WERE PERFORMED AND THAT SAID SERVICES AND THE CHARGES THEREFORE ARE HEREBY ACCEPTED. CUSTOMER ALSO HEREBY REAFFIRMS THE ACCURACY AND COMPLETENESS OF ALL INFORMATION CONTAINED IN THIS WORK ORDER AND ALL DOCUMENTATION PREVIOUSLY SUBMITTED TO HCC. THIS WORK ORDER IS DEEMED PART OF THE SERVICE AGREEMENT BETWEEN HERITAGE-CRYSTAL CLEAN, LLC AND THE CERTIFICATIONS CONTAINED THEREIN CONCERNING THE MATERIALS TO BE HANDLED AND THE SERVICES TO BE PROVIDED ARE INCORPORATED HEREIN BY REFERENCE AND DEEMED PART HEREOF AND SAID CERTIFICATIONS ARE DEEMED REMADE FOR THE SERVICES COVERED BY THIS WORK ORDER.

PER _____ *DATE* _____

TODAY'S SERVICE	8819.07
PRODUCT & TAX	
TOTAL AMOUNT DUE	
TOTAL REMITTANCE	
CHECK NUMBER	

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FORM 20311

THIS IS NOT AN INVOICE

HERITAGE-CRYSTAL CLEAN - BILL OF LADING

HCC Use: Loc: KANSAS CITY | Route: | Page 1 of 1
Doc #: | PB:140318 | WO #: 7-46440

Shipper's Name And Mailing Address
Greenbriar Rail Service
Hwy 59 West 258th Rd
Atchison KS 66002

Physical Address

Generator EPA ID

Generator State ID

Generator Phone:

Transporter 1 Company Name	Transp 1 EPA Id	Transp 1 State Id	Transp 1 Phone
HERITAGE-CRYSTAL CLEAN, LLC	ILR000130062		(847) 826-5570
Transporter 2 Company Name	**Transp 2 EPA Id**	**Transp 2 State Id**	**Transp 2 Phone**
Transporter 3 Company Name	**Transp 3 EPA Id**	**Transp 3 State Id**	**Transp 3 Phone**
Receiving Facility	**Facility EPA Id**	**Facility State Id**	**Facility Phone**
HERITAGE-CRYSTAL CLEAN, LLC. 1550 WEST RAYMOND ST INDIANAPOLIS, IN 46221	ILR000130062 24Hr Emergency Phone (800) 424-9300		(800) 424-9300

	NM	Waste Shipping Description and DOT Description (as applicable)	Container No.	Type	Total Qty	Unit Wt/Vol
A		NON DOT / RCRA Regulated (Crude oil Sludge #4)	2	DM	103	GY
B						
C						
D						

Special Handling Instructions, Additional Information and Handling Codes (as Applicable)
A) 133305-20

SHIPPERS CERTIFICATION: I certify that the material(s) described above on this bill of lading are fully and accurately described and are not subject to full regulation under the Resource Conservation and Recovery Act except 261.3 as related to CESQG.

Don Lassen — Don Lassen — 9.25.14
Printed/Typed Name — Signature — Date

Transporter 1 Acknowledgement of Receipt Materials

Jeremy Lons — [signature] — 9.25.14
Printed/Typed Name — Signature — Date

Transporter 2 Acknowledgement of Receipt Materials

Printed/Typed Name — Signature — Date

Transporter 3 Acknowledgement of Receipt Materials

Printed/Typed Name — Signature — Date

Additional Description / Discrepancies

Facility Owner or Operator: Certification of receipt of hazardous materials covered by this bill of lading.

Printed/Typed Name — Signature — Date

Crystal Clean

MANUAL WORK ORDER

HERITAGE-CRYSTAL CLEAN, LLC
(877) 938-7948

EMP ID #	SVC WK	WORK ORDER #	SVC REQ	AGRMT #	PURCHASE ORDER #	PAGE
27409		746640	157381	475910	187326 ed 9-25-14	

CCMS CUST. ID #	ROUTE	FEDERAL EPA ID #
101925		KSD 043936277

GEN. STATUS	STATE EPA ID #	COMMENTS

CCMS WO#: 746640

CUSTOMER/SHIPPER: Greenbrier Rail Services
Highway 59 West 258th Rd
Atchison, KS 66002

Contact Name: Don Lassen

DESTINATION:

Phone Number:

CARRIER: HERITAGE-CRYSTAL CLEAN, LLC **EPA ID #:** ILR 000 130 062 **Phone Number:** (877) 938-7948

BILL OF LADING

16 GAL. DRUMS	30 GAL. DRUMS	55 GAL. DRUMS	PROPER SHIPPING NAME	TOTAL	UNITS

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transport according to the applicable regulations of the Department of Transportation, as required. I also certify that neither hazardous waste, nor PCBs have been mixed with the used oil and/or parts cleaner solvent (if applicable).

Per _____ Customer/Shipper Date

Per _____ HCC/Carrier Date 9-25-14

SUMMARY OF CHARGES

TODAY'S SERVICE

WS #	PROD. CODE	DESCRIPTION	RTD. GALS.	UNIT	SI	NEXT SVC.	LOCATION COMMENTS	UNIT PRICE	QTY.	TOTAL CHARGE
133305-23	1011A	Crude Oil Sludge #1						378.40	19	7189.60
	174	Fuel Surcharge						15.91	1	15.91
-20	1014A	~~Diesel Sludge~~ Crude oil Sludge #4						279.18	2	558.36
-11	1011A	Paint Waste						378.40	3	1135.20

TAX

SERVICE SUBTOTAL

PRODUCTS

PRODUCT DESCRIPTION:

UNIT PRICE	QTY.	CHARGE

PRODUCT SALES TAX

SUBTOTAL PRODUCT & TAX

MACHINE INSPECTION

Cleanliness	G	P
Lamp Assembly	G	P
Drum Condition	G	P
Fusible Link Installed	G	P
Lid Unobstructed	G	P

SERVICE/PRODUCTS CHARGE SUMMARY

CUSTOMER HEREBY VERIFIES THAT THE ABOVE SERVICES WERE PERFORMED AND THAT SAID SERVICES AND THE CHARGES THEREFORE ARE HEREBY ACCEPTED. CUSTOMER ALSO HEREBY REAFFIRMS THE ACCURACY AND COMPLETENESS OF ALL INFORMATION CONTAINED IN THIS WORK ORDER AND ALL DOCUMENTATION HEREWITH SUBMITTED TO HCC. THIS WORK ORDER IS DEEMED PART OF THE SERVICE AGREEMENT BETWEEN HERITAGE-CRYSTAL CLEAN, LLC AND THE CERTIFICATIONS CONTAINED THEREIN CONCERNING THE MATERIALS TO BE HANDLED AND THE SERVICES TO BE PROVIDED ARE INCORPORATED HEREIN BY REFERENCE AND DEEMED PART HEREOF AND SAID CERTIFICATIONS ARE DEEMED REMADE FOR THE SERVICES COVERED BY THIS WORK ORDER.

TODAY'S SERVICE	8829.07
PRODUCT & TAX	
TOTAL AMOUNT DUE	
TOTAL REMITTANCE	

ENVIRONMENTAL SERVICES

CERTIFICATE OF RECYCLING / DISPOSAL

This certifies the waste material associated with Manifest # UU2536845 GBF has been received and processed for the proper recycling/disposal method(s) as defined by local, state, and federal regulations.

FACILITY NAME:	**Petro-Chem Processing Group, LLC**
ADDRESS:	**421 Lycaste Street** **Detroit, MI 48214**
EPA ID NUMBER:	**MID 980615298**
PHONE NUMBER:	**(313) 824-5840**

SIGNATURE: A. Jabalee

TITLE: PSC Representative

DATE: 11/29/14

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 2
3. Emergency Response Phone: 800-424-9300
4. Manifest Tracking Number: 002536845 GBF

GENERATOR

5. Generator's Name and Mailing Address: [illegible] HWY 59 WEST 238TH ROAD ATC[illegible], KS 66002
Generator's Site Address (if different than mailing address):
Generator's Phone: (913) 357-1635

6. Transporter 1 Company Name: NERI MAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: IL R000130062

7. Transporter 2 Company Name: Kinnie — U.S. EPA ID Number: [illegible]

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 [illegible], Detroit, MI 48214 — U.S. EPA ID Number: MID980615298
Facility's Phone: (313) 824-5840

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. ~~RQ, UN1993, WASTE FLAMMABLE LIQUID, N.O.S., 3, PG II, (D001) ERG# 128~~					D006
X	2 RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG III, (METHYL ETHYL KETONE, DIESEL) F005, D001, D018, D035 ERG# 128	018	DM	10800	P	F005 D001 D018 D035
X	3 RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (F003, F005, D001, D007, D008, D035) ERG# 128	002	DM	1100	P	F003 F005 D001 D007 D008 D035
	4					

14. Special Handling Instructions and Additional Information
~~[illegible]~~
3) CC133305-11

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. 39364

Generator's/Offeror's Printed/Typed Name: X Don L — Signature: [signature] — Month 10 Day 31 Year 16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Matt — Signature: [signature] — Month Day Year
Transporter 2 Printed/Typed Name: Melvin Blyd — Signature: [signature] — Month 10 Day 20 Year 16

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
—	H141	H141	—

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Manc[illegible] — Signature: [signature] — Month 10 Day 29 Year 1

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

ESIGNATED FACILITY TO NERATO

WO#: 00-0067MWK

Route: KANSAS CITY - ROUTE 2

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: KSD043936277

22. Page:

23. Manifest Tracking Number: 0025 26845

24. Generator's Name: NEIER RAIL SERVICE
HIGHWAY 59 WEST 258TH ROAD
ATCHISON, KS 66002

25. Transporter 3 Company Name: NEIER — U.S. EPA ID Number: IND984868406

26. Transporter _____ Company Name — U.S. EPA ID Number:

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes

32. Special Handling Instructions and Additional Information

GENERATOR

33. Transporter 3 Acknowledgment of Receipt of Materials
Printed/Typed Name: KERRY ANDERSON — Signature: Kerry Anderson — Month 10 Day 28 Year 14

34. Transporter _____ Acknowledgment of Receipt of Materials
Printed/Typed Name — Signature — Month — Day — Year

TRANSPORTER

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

DESIGNATED FACILITY

EPA Form 8700-22A (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD981955277
2. Page 1 of 1
3. Emergency Response Phone: 800-424-9300
4. Manifest Tracking Number: 002536845 GBF

5. Generator's Name and Mailing Address
GREENSHADE RAIL SERVICE
HIGHWAY 69 WEST 250TH ROAD
ATCHISON, KS 66002
Generator's Phone: (913)367-1635

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC
U.S. EPA ID Number: IL8000130082

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
SOUTH-CHEM PROCESSING GROUP
421 Lewards
Lewiston, MT 59214
Facility's Phone: (313)924-5960
U.S. EPA ID Number: MTD984061248

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. [illegible]					
X	2. RQ, UN1993, WASTE FLAMMABLE LIQUIDS N.O.S., 3, PGIII, (METHYL ETHYL KETONE, DIESEL) ERG# 128	018	DM	10800	P	F005 D001 D018 D035
X	3. RQ, UN1263, WASTE PAINT RELATED MATERIAL 3, PGII, (F003, F005, D001, D007, D008, D035) ERG# 128	002	DM	1100	P	F003 F005 D001 D007 D008 D035
	4.					

14. Special Handling Instructions and Additional Information
1) CC: 133305-33 TSD: HCCFBLIQ
2) CC: 133305-33 TSD: HCCFBLIQ
3) CC: 133305-11 TSD: HCCSOLIDS

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: X Don Lassen
Signature: X [signature]
Month 10 Day 13 Year 19

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Matt Ringwald
Signature: [signature]
Month 10 Day 13 Year 19
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

Crystal Clean

MANUAL WORK ORDER

HERITAGE-CRYSTAL CLEAN, LLC
(877) 938-7948

EMP ID #	SVC WK	WORK ORDER #	SVC REQ	AGRMT #	PURCHASE ORDER #	PAGE
30592	42	730994			188561	

CCMS CUST. ID #	ROUTE	FEDERAL EPA ID #
		KSD043936272

GEN. STATUS	STATE EPA ID #	COMMENTS
LQG		

CCMS WO#:

CUSTOMER/SHIPPER: GREENBRIER RAIL SERVICE HIGHWAY 59 WEST 26TH ROAD ATCHISON, KS 66002 913-367-1635

Contact Name:

DESTINATION: Heritage Crystal Clean 50 FUNSTON KANSAS CITY, KS 66115 913-233-2651

Phone Number:

CARRIER: HERITAGE-CRYSTAL CLEAN, LLC **EPA ID #:** ILR 000 130 062 **Phone Number:** (877) 938-7948

BILL OF LADING

16 GAL. DRUMS	30 GAL. DRUMS	55 GAL. DRUMS	PROPER SHIPPING NAME	TOTAL	UNITS

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transport according to the applicable regulations of the Department of Transportation, as required. I also certify that neither hazardous waste, nor PCBs have been mixed with the used oil and/or parts cleaner solvent (if applicable).

Per _____
Customer/Shipper Date

Per _____
HCC/Carrier Date

SUMMARY OF CHARGES

TODAY'S SERVICE

WS #	PROD. CODE	DESCRIPTION	RTD. GALS.	UNIT	SI	NEXT SVC.	LOCATION COMMENTS	UNIT PRICE	QTY.	TOTAL CHARGE
133305										

-23 IOWA 55 GAL SOLID FUEL 372 40(18) 6811

-11 IOWA 55 GAL SOLID FUEL PAINT WASTE 372 40(2) 7508

TAX

SERVICE SUBTOTAL

PRODUCTS

PRODUCT DESCRIPTION:	UNIT PRICE	QTY.	CHARGE

PRODUCT SALES TAX

SUBTOTAL PRODUCT & TAX

MACHINE INSPECTION

Cleanliness	G	P
Lamp Assembly	G	P
Drum Condition	G	P
Fusible Link Installed	G	P
Lid Unobstructed	G	P
Properly Grounded	G	P
Local Phone # affixed	G	P
Decals in Place	G	P

SERVICE/PRODUCTS CHARGE SUMMARY

CUSTOMER HEREBY VERIFIES THAT THE ABOVE SERVICES WERE PERFORMED AND THAT SAID SERVICES AND THE CHARGES THEREFORE ARE HEREBY ACCEPTED. CUSTOMER ALSO HEREBY REAFFIRMS THE ACCURACY AND COMPLETENESS OF ALL INFORMATION CONTAINED IN THIS WORK ORDER AND ALL DOCUMENTATION PREVIOUSLY SUBMITTED TO HCC. THIS WORK ORDER IS DEEMED PART OF THE SERVICE AGREEMENT BETWEEN HERITAGE-CRYSTAL CLEAN, LLC AND THE CERTIFICATIONS CONTAINED THEREIN CONCERNING THE MATERIALS TO BE HANDLED AND THE SERVICES TO BE PROVIDED ARE INCORPORATED HEREIN BY REFERENCE AND DEEMED PART HEREOF AND SAID CERTIFICATIONS ARE DEEMED REMADE FOR THE SERVICES COVERED BY THIS WORK ORDER.

PER _____ DATE _____

TODAY'S SERVICE	
PRODUCT & TAX	
TOTAL AMOUNT DUE	
TOTAL REMITTANCE	
CHECK NUMBER	

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THIS IS NOT AN INVOICE

* Federal Uniform * 1014 1066 20072 PR: 140214

Loc: KANSAS CITY Route: 2 20-55s DC BOL: 749090

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of 1
3. Emergency Response Phone: 800-424-9300, #1
4. Manifest Tracking Number: 002432261 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, 15624 258TH RD, CUMMINGS, KS 66016
Generator's Site Address (if different than mailing address):
Generator's Phone: 866-785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: Nuex Inc — U.S. EPA ID Number: IND 984868406

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 Lycaste, Detroit, MI 48214 — U.S. EPA ID Number: MID980615298
Facility's Phone: (313) 824-5840

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PGIII, (METHYL ETHYL KETONE, DIESEL) (F005, D001, D018, D035) ERG#128	019	DM	9500	P	F005 D001 D018 D035
X	2. RQ, UN1263, WASTE PAINT RELATED MATERIAL 3, PGII (F003, F005, D001, D007, D008, D035) ERG# 128	001	DM	500	P	F003 F005 D001 D007 D008 D035
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1) CC: 284351-23 TSD: HCCFBLIQ 1011 2) CC: 284351-11 ~~TSD: HCCFBLIQ~~ 1011 HCCSOLIDS

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. 5556

Generator's/Offeror's Printed/Typed Name: Don Lossen — Signature: Don Lossen — Month 10 Day 28 Year 14

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT Rinaldi — Signature: [signature] — Month 10 Day 28 Year 14
Transporter 2 Printed/Typed Name: DALE FINE — Signature: [signature] — Month 11 Day 5 Year 14

18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. H141 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: T McMullough — Signature: [signature] — Month 11 Day 18 Year 14

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use o el (12-pitch) typewriter.) Form Approve . OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number KSD042936277	2. Page 1 of	3. Emergency Response Phone 800-424-9300	4. Manifest Tracking Number 002432261 GBF

5. Generator's Name and Mailing Address SERVICES

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

Facility's Phone

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG III, (METHYL ETHYL KETONE, DIESEL) (F005, D001, D018, D035)	019	DM	9500	P	~~F005~~ ~~D001~~ ~~D018~~ ~~D035~~
X		001	DM	500	P	~~F003~~ ~~F005~~ ~~D001~~ ~~D007~~ ~~D008~~ ~~D035~~
	4.					

14. Special Handling Instructions and Additional Information
1) CC: 284351-23 TSD: HCCFBLIQ 2) CC: 284351-11 TSD: HCCFBLIQ

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name Signature

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name MATT Ringgold Signature Month 10 Day 25 Year 10

Transporter 2 Printed/Typed Name Signature Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name Signature Month Day Year

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

Crystal Clean

MANUAL WORK ORDER

HERITAGE-CRYSTAL CLEAN, LLC
(877) 938-7948

EMP ID #	SVC WK	WORK ORDER #	SVC REQ	AGRMT #	PURCHASE ORDER #	PAGE
30592	44	749090			189589	

CCMS CUST. ID #	ROUTE	FEDERAL EPA ID #
	2	KSD043936277

GEN. STATUS	STATE EPA ID #	COMMENTS
LQG		

CCMS WO#:

CUSTOMER/SHIPPER: GBW RAILCAR SERVICES 15624 258TH RD SUMMITA KS 66016

Contact Name:

DESTINATION: Heritage Crystal Clean 30 Houston Road Kansas City, KS 66115

Phone Number:

CARRIER: HERITAGE-CRYSTAL CLEAN, LLC **EPA ID #:** ILR 000 130 062 **Phone Number:** (877) 938-7948

BILL OF LADING

16 GAL. DRUMS	30 GAL. DRUMS	55 GAL. DRUMS	PROPER SHIPPING NAME	TOTAL	UNITS

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transport according to the applicable regulations of the Department of Transportation, as required. I also certify that neither hazardous waste, nor PCBs have been mixed with the used oil and/or parts cleaner solvent (if applicable).

Per _____
Customer/Shipper Date

Per _____
HCC/Carrier Date

SUMMARY OF CHARGES

TODAY'S SERVICE

WS #	PROD. CODE	DESCRIPTION	RTD. GALS.	UNIT	SI	NEXT SVC.	LOCATION COMMENTS	UNIT PRICE	QTY.	TOTAL CHARGE
[redacted]	1011A	55G SOLID FUEL								
[redacted]	1011A	55G SOLID FUEL					PAINT WASTE			

TAX

SERVICE SUBTOTAL

PRODUCTS

PRODUCT DESCRIPTION:	UNIT PRICE	QTY.	CHARGE

PRODUCT SALES TAX

SUBTOTAL PRODUCT & TAX

MACHINE INSPECTION

Cleanliness	G	P
Lamp Assembly	G	P
Drum Condition	G	P
Fusible Link Installed	G	P
Lid Unobstructed	G	P
Properly Grounded	G	P
Local Phone # affixed	G	P
Decals in Place	G	P

SERVICE/PRODUCTS CHARGE SUMMARY

CUSTOMER HEREBY VERIFIES THAT THE ABOVE SERVICES WERE PERFORMED AND THAT SAID SERVICES AND THE CHARGES THEREFORE ARE HEREBY ACCEPTED. CUSTOMER ALSO HEREBY REAFFIRMS THE ACCURACY AND COMPLETENESS OF ALL INFORMATION CONTAINED IN THIS WORK ORDER AND ALL DOCUMENTATION PREVIOUSLY SUBMITTED TO HCC. THIS WORK ORDER IS DEEMED PART OF THE SERVICE AGREEMENT BETWEEN HERITAGE-CRYSTAL CLEAN, LLC AND THE CERTIFICATIONS CONTAINED THEREIN CONCERNING THE MATERIALS TO BE HANDLED AND THE SERVICES TO BE PROVIDED ARE INCORPORATED HEREIN BY REFERENCE AND DEEMED PART HEREOF AND SAID CERTIFICATIONS ARE DEEMED REMADE FOR THE SERVICES COVERED BY THIS WORK ORDER.

PER _____ DATE _____

TODAY'S SERVICE	
PRODUCT & TAX	
TOTAL AMOUNT DUE	
TOTAL REMITTANCE	
CHECK NUMBER	

THIS IS NOT AN INVOICE

ENVIRONMENTAL SERVICES

CERTIFICATE OF RECYCLING / DISPOSAL

This certifies the waste material associated with Manifest # UUA4322 606PF has been received and processed for the proper recycling/disposal method(s) as defined by local, state, and federal regulations.

FACILITY NAME:	**Petro-Chem Processing Group, LLC**
ADDRESS:	**421 Lycaste Street** **Detroit, MI 48214**
EPA ID NUMBER:	**MID 980615298**
PHONE NUMBER:	**(313) 824-5840**

SIGNATURE: A. Jabalee

TITLE: PSC Representative

DATE: 12/4/14

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: K D043 627 1

2. Page 1 of 25

3. Emergency Response Phone: 800-424-9300

4. Manifest Tracking Number: 002432260 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, 15624 258TH RD., CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone: 866-785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILR000130062

7. Transporter 2 Company Name: Robert D. Wood Inc — U.S. EPA ID Number: KSD006253589

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 Lycaste, Detroit, MI 48214 — U.S. EPA ID Number: MID980615298

Facility's Phone: (313) 824-3540

9a. HM	9b. U.S. DOT Description (including, Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PG III, (METHYL ETHYL KETONE, DIESEL) (F005, D001, D018, D035) ERG#128	009	DM	4500	P	F005 D001 D018 D035
X	RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II, (F003, F005, D001, D007, D008, D035) ERG#128	001	DM	400	P	F003 F005 D001 D007 D008 D035

14. Special Handling Instructions and Additional Information: 1) CC: 28435I-23 TSD: HCCFBLIQ 1011 2) CC: 28435I-11 TSD: HCCSOLIDS 1011 6335G

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Robert Puddle — Signature: X Robert Puddle — Month 11 Day 11 Year 14

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MATT Ringold — Signature: Matt R — Month 11 Day 11 Year 14

Transporter 2 Printed/Typed Name: R Clark — Signature: — Month 11 Day 14 Year 14

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H141 2. H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: [illegible] — Signature: [illegible] — Month 12 Day 4 Year 14

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: KSD043936277

22. Page: 2

23. Manifest Tracking Number: 002432260GBF

24. Generator's Name: GBW Railcar Services
15624 258th Rd
Cummings, KS 66016

25. Transporter 3 Company Name: NEIER

U.S. EPA ID Number: IND984868406

26. Transporter _____ Company Name

U.S. EPA ID Number

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes
		2	1/14			

32. Special Handling Instructions and Additional Information

33. Transporter 3 Acknowledgment of Receipt of Materials

Printed/Typed Name: KERRY ANDERSON | Signature: Kerry | Month 12 | Day 3 | Year 14

34. Transporter _____ Acknowledgment of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

GENERATOR

TRANSPORTER

DESIGNATED FACILITY

EPA Form 8700-22A (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

730966

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043936277
2. Page 1 of
3. Emergency Response Phone: 800-424-9300
4. Manifest Tracking Number: 002432260 GBF

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES, 15624 258TH RD, CUMMINGS, KS 66016
Generator's Site Address (if different than mailing address)
Generator's Phone: 866 785-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC
U.S. EPA ID Number: IL8000130062

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 451 LYCASER, DETROIT, MI 48213
U.S. EPA ID Number: MID980614698
Facility's Phone: (313) 924-3880

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S. 3, PGIII, (METHYL ETHYL KETONE, DIESEL) (F005, D001, D018, D035) ERG# 128	009	DM	4500	P	F005 D035	D001	D018
X	2. RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PGII, (F003, F005, D001, D007, D008, D035) ERG# 128	001	DM	400	P	F003 D007	F005 D008	D001 D035
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1) CC: 284351-23 TSD: HCCFBLIQ 2) CC: 284351-11 TSD: HCCSOLIDS

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: X Robert Pauletto
Signature: X [signature]
Month 11 Day 11 Year 16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Port of entry/exit:
Transporter signature (for exports only):
Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT KINCAID
Signature: [signature]
Month 11 Day 11 Year 16
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

Crystal Clean

MANUAL WORK ORDER

HERITAGE-CRYSTAL CLEAN, LLC
(877) 938-7948

EMP ID #	SVC WK	WORK ORDER #	SVC REQ	AGRMT #	PURCHASE ORDER #	PAGE
30572		730966			1905 69	

CCMS CUST. ID #	ROUTE	FEDERAL EPA ID #
		KS0043936277

GEN. STATUS	STATE EPA ID #	COMMENTS
LQG		

CCMS WO#:

CUSTOMER/SHIPPER: GBW RAILCAR SERVICE
15624 255TH RD
CUMMINGS, KS 66016
913-735-1051

Contact Name:

DESTINATION: Heritage Crystal Clean
30 Fowslun Road
Kansas City, KS 66115
913-281-2651

Phone Number:

CARRIER: HERITAGE-CRYSTAL CLEAN, LLC **EPA ID #:** ILR 000 130 062 **Phone Number:** (877) 938-7948

BILL OF LADING

16 GAL. DRUMS	30 GAL. DRUMS	55 GAL. DRUMS	PROPER SHIPPING NAME	TOTAL	UNITS

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transport according to the applicable regulations of the Department of Transportation, as required. I also certify that neither hazardous waste, nor PCBs have been mixed with the used oil and/or parts cleaner solvent (if applicable).

Per _____
Customer/Shipper Date

Per _____
HCC/Carrier Date

SUMMARY OF CHARGES

TODAY'S SERVICE

WS #	PROD. CODE	DESCRIPTION	RTD. GALS.	UNIT	SI	NEXT SVC.	LOCATION COMMENTS	UNIT PRICE	QTY.	TOTAL CHARGE
[redacted]	[redacted]									
-23	10HA	55G	SOLID FUEL				OIL SLUDGE	378	(9)	3405
-11	10HA	55G	SOLID FUEL				PAINT WASTE	378	(1)	378

TAX

SERVICE SUBTOTAL

PRODUCTS

PRODUCT DESCRIPTION:	UNIT PRICE	QTY.	CHARGE

PRODUCT SALES TAX

SUBTOTAL PRODUCT & TAX

MACHINE INSPECTION

Cleanliness	G	P
Lamp Assembly	G	P
Drum Condition	G	P
Fusible Link Installed	G	P
Lid Unobstructed	G	P
Properly Grounded	G	P
Local Phone # affixed	G	P
Decals in Place	G	P

SERVICE/PRODUCTS CHARGE SUMMARY

CUSTOMER HEREBY VERIFIES THAT THE ABOVE SERVICES WERE PERFORMED AND THAT SAID SERVICES AND THE CHARGES THEREFORE ARE HEREBY ACCEPTED. CUSTOMER ALSO HEREBY REAFFIRMS THE ACCURACY AND COMPLETENESS OF ALL INFORMATION CONTAINED IN THIS WORK ORDER AND ALL DOCUMENTATION PREVIOUSLY SUBMITTED TO HCC. THIS WORK ORDER IS DEEMED PART OF THE SERVICE AGREEMENT BETWEEN HERITAGE-CRYSTAL CLEAN, LLC AND THE CERTIFICATIONS CONTAINED THEREIN CONCERNING THE MATERIALS TO BE HANDLED AND THE SERVICES TO BE PROVIDED ARE INCORPORATED HEREIN BY REFERENCE AND DEEMED PART HEREOF AND SAID CERTIFICATIONS ARE DEEMED REMADE FOR THE SERVICES COVERED BY THIS WORK ORDER.

PER _____ *DATE* _____

TODAY'S SERVICE	3784
PRODUCT & TAX	
TOTAL AMOUNT DUE	
TOTAL REMITTANCE	
CHECK NUMBER	

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THIS IS NOT AN INVOICE

PB: 141208

Loc: KANSAS CITY 1) 55DM Route: KANSAS CITY - ROUTE 1 4) 55DMLIQ SO#: 00-0069656

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD049936277
2. Page 1 of 1/2
3. Emergency Response Phone: 800-424-9300, "1"
4. Manifest Tracking Number: 002752632 GBF

5. Generator's Name and Mailing Address
GBW RAILCAR SERVICES
15624 250TH RD
CUMMINGS, KS 66016

Generator's Site Address (if different than mailing address)

Generator's Phone: (866) 765-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC — U.S. EPA ID Number: ILRD001300062

7. Transporter 2 Company Name: ROBBIE D WOOD — U.S. EPA ID Number: ACD 067138891

8. Designated Facility Name and Site Address
PETRO-CHEM PROCESSING GROUP
421 Lycaste
Detroit, MI 48214

U.S. EPA ID Number: MID980615298

Facility's Phone: (313) 824-5840

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	~~NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PG III (CADMIUM) (D006) ERG# 171~~					D006		
X	2. RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PGII, (F003, F005, D001, D007, D008, D035) ERG#128	001	DM	500	P	F003 D007	F005 D008	D001 D035
X	~~3. NA1993, DIESEL FUEL, 3, PGIII, ERG#128~~	~~002~~	~~DM~~	~~550~~	~~P~~			
X	4. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PGII, (METHYL ETHYL KETONE, DIESEL) (F005, D001, D018, D035) ERG#128	002	DM	550	P	F005 D035	D001	D018

14. Special Handling Instructions and Additional Information
~~1) CC: 284351-13 TSD: HCCMET H141~~ 4) CC:284351-23 TSD!HCCFBLIQ 1011
2) CC:284351-11 TSD!HCCSOLIDS 1011

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. 86246

Generator's/Offeror's Printed/Typed Name: Don Lassen — Signature: Don Lassen — Month 12 Day 22 Year 14

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT Ringgold — Signature: Matt Ringgold — Month 12 Day 22 Year 14
Transporter 2 Printed/Typed Name: R STRIBLEP — Signature: [illegible] — Month 12 Day 30 Year 14

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. — 2. H141 3. — 4. H061

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: T McMullough — Signature: [illegible] — Month 1 Day 6 Year 15

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)	21. Generator ID Number KSD043936277	22. Page	23. Manifest Tracking Number 002782632

24. Generator's Name GBW RAILCAR SERVICES
15624 258th RD
Cummings, KS 66016

25. Transporter 3 Company Name NEIER — U.S. EPA ID Number IND984868406

26. Transporter _____ Company Name — U.S. EPA ID Number

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		

32. Special Handling Instructions and Additional Information

GENERATOR

TRANSPORTER

33. Transporter 3 Acknowledgment of Receipt of Materials
Printed/Typed Name KERRY ANDERSON Signature Kerry Anderson Month 1 Day 5 Year 15

34. Transporter _____ Acknowledgment of Receipt of Materials
Printed/Typed Name Signature Month Day Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

EPA Form 8700-22A (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

LOG: KANSAS TY ROUTE: KANSAS CITY - ROUTE 1 EQP: 00-0081666

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD043931277
2. Page 1 of 1
3. Emergency Response Phone: 800-424-9300, PIN
4. Manifest Tracking Number: 002752632 GBF

GENERATOR

5. Generator's Name and Mailing Address: GSM RAILCAR SERVICES, 15624 288TH RD, CUMMINGS, KS 66016
Generator's Site Address (if different than mailing address)
Generator's Phone: (866) 705-4082

6. Transporter 1 Company Name: HERITAGE-CRYSTAL CLEAN, LLC
U.S. EPA ID Number: ILD000130052

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: PETRO-CHEM PROCESSING GROUP, 421 LYCASTE, DETROIT, MI 48214
U.S. EPA ID Number: MID980615228
Facility's Phone: (313) 824-5840

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. NON-RCRA HAZARDOUS WASTE SOLID, N.O.S., 9, NA 3077 (CADMIUM) (D006) ERG# 171					D006
X	2. RQ, UN1263, WASTE PAINT RELATED MATERIAL, 3, PGII, (F003, F005, D001, D007, D008, D035) ERG#128	001	DM	500	P	F003 F005 D001 D007 D008 D035
X	3. NA1993, DIESEL FUEL, 3, PGIII, ERG#128	002	DM	550	P	
X	4. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PGIII, (METHYL ETHYL KETONE, DIESEL) (F005, D001, D018, D035) ERG#128	002	DM	550	P	F005 D001 D018 D035

14. Special Handling Instructions and Additional Information
1) CC: 284351-12 TSD: RECYCLE EL41 1) CC'284351-23 TSD'HCCFBLIQ
2) CC'284351-11 TSD'HCCSOLIDS

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Don Lassen
Signature: Don Lassen
Month 12 Day 22 Year 14

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT RINGGOLD
Signature: Matt Ringgold
Month 12 Day 22 Year 14
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name Signature Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

Crystal Clean

WORK ORDER

HERITAGE-CRYSTAL CLEAN, LLC
(877) 938-7948

EMP ID #	SVC WK	WORK ORDER #	SVC REQ	AGRMT #	PURCHASE ORDER #	PAGE
	53	00 - 06Y656	157381	475910	192232	1 of 1

CCMS CUST. ID #	ROUTE	FEDERAL EPA ID #
0 9 5	KANSAS CITY ROUTE 1	K S D 0 4 3 9 3 6 2 7 7

COMMENTS	GEN. STATUS	STATE EPA ID #
EMERGEN # 800-424-9300	LQG	

DRIVER MUST CALL DAY BEFORE SERVICE. GET PO# EACH SVC
FROM LINDA 12/6/10 MR

CUSTOMER/SHIPPER: GBW RAILCAR SERVICES
15624 258TH RD
CUMMINGS, KS 66016

Contact Name: DON LASSEN (866)765-4082

DESTINATION: HERITAGE-CRYSTAL CLEAN, LLC
30 HUNSTON ROAD
KANSAS CITY, KS 66115

Phone Number: (913)233-2651

CARRIER: HERITAGE-CRYSTAL CLEAN, LLC **EPA ID #:** ILR 000 130 062 **Phone Number:** (877) 938-7948

BILL OF LADING

16 GAL. DRUMS	30 GAL. DRUMS	55 GAL. DRUMS	PROPER SHIPPING NAME	TOTAL	UNITS

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled a in proper condition for transport according to the applicable regulations of the Department of Transportation, as req I also certify that neither hazardous waste, nor PCBs have been mixed with the used oil and/or parts cleaner solvent (if applicable

Per _____
Customer/Shipper Date

Per _____
HCC/Carrier Date

SUMMARY OF CHARGES

TODAY'S SERVICE

WS #	PROD. CODE	DESCRIPTION	RTD. GALS.	UNIT	SI	NEXT SVC.	LOCATION COMMENTS	UNIT PRICE	QTY.	TOTAL CHARGE
284351										
43		55G LANDFILL TABILZ				NONE	12	50.00		
174		FUEL SURCHARGE				NONE		$15.09	1	$15.09
-11	1011A	55 GAL SOLID FUEL					PAINT WASTE	378.40(1)		378.40
		~~55A 55GAL SOLID FUEL~~					DIESEL FUEL	~~412.16(1)~~		~~412.32~~
-23	1011A	55 GAL SOLID FUEL					DIESEL SLUDGE	378.40(2)		756.80

TAX $0.00
SERVICE SUBTOTAL ~~$15.09~~

PRODUCTS

PRODUCT DESCRIPTION:	UNIT PRICE	QTY.	CHARGE

PRODUCT SALES TAX
SUBTOTAL PRODUCT & TAX

MACHINE INSPECTION		
Cleanliness	G	P
Lamp Assembly	G	P
Drum Condition	G	P
Fusible Link Installed	G	P
Lid Unobstructed	G	P
Properly Grounded	G	P
Local Phone # affixed	G	P
Decals in Place	G	P

SERVICE/PRODUCTS CHARGE SUMMARY

CUSTOMER HEREBY VERIFIES THAT THE ABOVE SERVICES WERE PERFORMED AND THAT SAID SERVICES AND THE CHARGES THEREFORE ARE HEREBY ACCEPTED. CUSTOMER ALSO HEREBY REAFFIRMS THE ACCURACY AND COMPLETENESS OF ALL INFORMATION CONTAINED IN THIS WORK ORDER AND ALL DOCUMENTATION PREVIOUSLY SUBMITTED TO HCC. THIS WORK ORDER IS DEEMED PART OF THE SERVICE AGREEMENT BETWEEN HERITAGE-CRYSTAL CLEAN, LLC AND THE CERTIFICATIONS CONTAINED THEREIN CONCERNING THE MATERIALS TO BE HANDLED AND THE SERVICES TO BE PROVIDED ARE INCORPORATED HEREIN BY REFERENCE AND DEEMED PART HEREOF AND SAID CERTIFICATIONS ARE DEEMED REMADE FOR THE SERVICES COVERED BY THIS WORK ORDER.

PER _____ *DATE* _____

TODAY'S SERVICE	3.13
PRODUCT & TAX	
TOTAL AMOUNT DUE	
TOTAL REMITTANCE	
CHECK NUMBER	

25394

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD 043 936 277
2. Page 1 of 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 007156362 FLE

GENERATOR

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES - CUMMI
15624 258TH ROAD
CUMMINGS, KS 66016
Generator's Phone:

Generator's Site Address (if different than mailing address): 15624 258TH ROAD CUMMINGS, KS 66016

6. Transporter 1 Company Name: EQ INDUSTRIAL SERVICES — U.S. EPA ID Number: MIK 435 642 742

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: EQ OKLAHOMA, INC.
2700 South 25th West Avenue
TULSA, OK 74107
Facility's Phone: (918) 582-9595
U.S. EPA ID Number: OKD 000 402 396

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. ~~RQ, UN1325, Waste Flammable solids, organic, n.o.s. (Benzene, Toluene), 4.1 PGII, flammable, ERG#133~~ RQ, UN1993, Waste flammable liquid, nos. (benzene, toluene), 3, PGII, Flammable, ERG#128	49 50	DM	2750	G	D001 F005	D018 F005	F005
X	2. ~~UN2071, Ammonium nitrate based fertilizer 9, PGIII, ERG #140~~ UN1993, Waste flammable liquid, nos, 3, PGII ERG#128	01	DM	55	G	D001 F005	D035	(F003)
	3. Non RCRA, Non DOT Hazardous Material (Ethyl alcohol & water)	01	DM	55	G			
X	4. RQ, UN1325, WASTE FLAMMABLE SOLID, ORGANIC, N.O.S., (BENZENE, TOLUENE), 4.1, PG II, FLAMMABLE ERG#133	01	DM	55	G	D001	D018	

14. Special Handling Instructions and Additional Information
E155413EOK B151165EOK/Paint
1. ~~B151102EOK / Crude Oil~~ 2. ~~B151008EOK / Natural Fertilizer Solution~~ 3. D151137EOK / Ethyl Alcohol 4 B151162EOK

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Andrew Jones — Signature: [signature] — Month 06 Day 19 Year 15

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: John D. Stallam — Signature: [signature] — Month 06 Day 19 Year 15
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
OK TO CORRECT LINE 1 QUANTITY AND ADD LINE 4 REV MATT CROSMAN 6/25/15
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141	H141	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Mmacke — Signature: [signature] — Month 06 Day 22 Year 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

Attachment 23 Page 1 of 4

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: KSD 043 936 277
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Manifest Tracking Number: 007156362 FLE

5. Generator's Name and Mailing Address: GBW RAILCAR SERVICES - CUMMI
15624 258TH ROAD
CUMMINGS, KS 66016
Generator's Phone:

Generator's Site Address (if different than mailing address):
15624 258TH ROAD
CUMMINGS, KS 66016

6. Transporter 1 Company Name: EQ INDUSTRIAL SERVICES
U.S. EPA ID Number: MIK 435 642 742

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: EQ OKLAHOMA, INC.
2700 South 25th West Avenue
TULSA, OK 74107
Facility's Phone: (918) 582-9595
U.S. EPA ID Number: OKD 000 402 396

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, UN1325, Waste Flammable solids, organic, n.o.s. (Benzene, Toluene), 4.1, PGII, flammable, ERG#133 RQ, UN1993, Waste Flammable liquids, n.o.s. (Benzene, Toluene), 3, PGII, flammable, ERG#128	50	DM	2750	G	D001	D018	F005
X	2. UN2071, Ammonium nitrate based fertilizer, 9, PGIII, ERG #140 UN1993, Waste flammable liquids, n.o.s., 3, PGII ERG# 128	01	DM	55	G	D001 F005	D035	F003
	3. Non RCRA, Non DOT Hazardous Material (Ethyl alcohol & water)	01	DM	55	G			
	4.							

14. Special Handling Instructions and Additional Information
E155403EOK B151164EOK/PA
1. B151102EOK / Crude Oil 2. G151008EOK / Natural Fertilizer Solution 3. D151137EOK / Ethyl Alcohol

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: [illegible] Signature: [signature] Month: 06 Day: 19 Year: 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: John D. Stathem Signature: [signature] Month: 06 Day: 19 Year: 15
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141	H141	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Signature: Month: Day: Year:

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. GENERATOR'S INITIAL COPY

US ecology

LAND DISPOSAL RESTRICTION AND CERTIFICATION FORM

Generator: GBW RAILCAR SERVICES - CUMMINGS
15624 258TH ROAD CUMMINGS, KS 66016

U.S. EPA ID No.: KSD043936277

Manifest: 007156362FLE

Page - Line

1 - 01 **Approval:** ~~B151162EOK~~ F155413 EOK NWW

Waste Code(s): D001 D018 F005

Hazardous Constituents: 141 Naphthalene 184 Toluene

Subcategory(s): D001 - Ignitable Characteristic Wastes

Certification: THIS RESTRICTED WASTE REQUIRES TREATMENT TO THE APPLICABLE STANDARD.
This waste must be treated to the applicable performance based treatment standard set forth in 40CFR Par 268 Subpart C and Subpart D 268.40 or RCRA Section 3004(d) prior to land disposal.

1 - 02 **Approval:** ~~G151698EOK~~ B151165 EOK NWW

Waste Code(s): D001 D035 F003 F005

Hazardous Constituents: ~~NONE~~

Subcategory(s): D001

Certification:

1 - 03 **Approval:** D151137EOK NWW

Waste Code(s):

Hazardous Constituents: NONE

Subcategory(s):

Certification:

I hereby certify that all information submitted on this and all associated documents, is complete and accurate to the best of my knowledge and information.

Generator Signature: [signature] **Title:** Safety Manager

Printed Name: [illegible] **Date:** 6/19/12

For questions regarding this form, please call Customer Service at (800) 592 5489.

US ecology

EQ Oklahoma, Inc.
2700 South 25th West Avenue
Tulsa, OK 74107-3435

Emergency Response #:
Phone: 918-582-9595
Fax: 918-560-5252

Work Order: 195400
Reference Code:
Arrival Time: 06/18/2015
Date: 06/18/2015
Prepared By: Becky Mackey

BILLING INFORMATION

Name: U S WASTE INDUSTRIES INC
Acct. #: 5627-99
Phone: (843) 538-2601
Addr: 4420 JEFFERIES
WALTERBORO, SC 29488

Contact: DARLENE HELMEY
Title: ADMINISTRATION
Phone: (843) 538-2601
Mobile: ( ) -
PO / Rel:

GENERATOR INFORMATION

Name: GBW RAILCAR SERVICES - CL
EPA #: KSD043936277 (ID: 128393)
Phone: ( ) -
Addr: 15624 258TH ROAD
CUMMINGS, KS 66016

Contact:
Title:
Phone: ( ) -
Mobile: ( ) -

TSDF INFORMATION

TSDF: EQ OKLAHOMA, INC.
Addr: 2700 South 25th West Avenue
TULSA,OK 74107

EPA #: OKD000402396
Phone: (918) 582-9595
Fax: (918) 560-5252

Comments:

Pickup	Date	Time	Explanation
Arrive at Shipper:	6-19-15	8:30	
Start Loading:		9:00	
Finish Loading:		11:00	
Leave Site:		11:30	

SHIPMENT RECEIVED IN APPARENT GOOD ORDER (CONTENTS UNKNOWN) SUBJECT TO THE TERMS AND CONDITIONS OF THE UNIFORM STRAIGHT BILL OF LADING AND ALL GOVERNING CLASSIFICATIONS AND TARIFFS LAWFULLY ON FILE ON THE DATE OF SHIPMENT

THIS IS TO CERTIFY THAT THE ABOVE NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED AND LABELED AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION

Driver Signature — Date: 6-19-15

Customer Signature — Date: 6-19-15

Please comment on the job so we can continue to provide better service: ☐ Excellent ☐ Satisfactory ☐ Poor

Chemical Name: Spotcheck SKC-S cleaner/remover

Manufacturer: Magnaflux

Container size: 300g

Location: VLA

Disposal: Place empty container in trash.

SPOTCHECK®

MATERIAL SAFETY DATA SHEET

SPOTCHECK® SKC-S

1. IDENTIFICATION

Company: MAGNAFLUX
Address: 3624 West Lake Avenue, Glenview, Illinois 60026
Telephone No.: 847-657-5300 (Off-Hour Emergency Number - CHEMTREC - 1-800-424-9300).
Product Use: Nondestructive testing material
Packages: 1 gallon can, 5 gallon pail, 55 gallon drums, aerosols
NFPA Rating: Health 1, Flammability 3, Reactivity 0
PIN (Canada): Bulk: UN1268
Revision Date: April 16, 2010

2. HAZARDOUS INGREDIENTS

Ingredient	*Wt./Wt. %*	*CAS #*	*TLV*	*PEL*	*LD_{50}*	*LC_{50}*
Light aliphatic solvent naphtha	60-100	64742-89-8 Or 64742-49-0	300ppm (8 hr.TWA)	not avail.	5 g/kg (oral/rat)	3400 ppm (4hrs/rat)
Carbon dioxide propellant (Aerosol Only)	3-7	124-38-9	not avail.	5000 ppm	not avail.	not avail.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Flammable liquid and aerosol. Vapor may cause flash fire. Harmful or fatal if swallowed. Mist or vapor may irritate the respiratory tract. Liquid contact may cause eye and skin irritation. Over-exposure may cause central nervous system (CNS) depression and target organ effects. Spills may create a slipping hazard.

POTENTIAL HEALTH EFFECTS & SIGNS AND SYMPTOMS OF EXPOSURE:

Skin Contact: Irritating to skin. Repeated exposure may cause skin dryness or cracking.
Eyes: Vapors may be irritating to the eye.
Inhalation: Vapors expected to be slightly irritating. Vapors may cause drowsiness and dizziness.
Ingestion: Harmful: may cause lung damage if swallowed.
Medical conditions known to be aggravated by exposure to product: Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Eyes, Skin, and Respiratory system.

4. FIRST AID

Skin Contact: Wash off with soap and water. Do not use ointments. Seek medical attention if tissue appears damaged or if pain or irritation persists.
Eyes: Rinse carefully under upper and lower eyelids using plenty of water. Rest eyes for 30 minutes. If redness, burning, blurred vision, or swelling persists, transport to the nearest medical facility for additional treatment.
Inhalation: Remove to fresh air if dizzy or nauseated. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
Ingestion: Do not induce vomiting. Transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

NOTE: In all severe cases, contact physician immediately. Local telephone operators can furnish number of regional poison control center.

5. FIRE HAZARD

Conditions of flammability: Bulk and aerosol: Readily ignited in presence of ignition sources.
Flash point: Min. 57°F (14°C) (Pensky-Martens) closed cup.
Flammable limits in air: 1% to 6%.
Extinguishing media: Carbon dioxide, foam
Special fire fighting procedures: Keep containers cool with water spray. Do not spray water directly on burning SKC-S. It will float and spread the fire.
Hazardous combustion products: Smoke, soot, oxides of carbon.
Unusual fire hazards: Aerosol cans may burst if heated above 130°F (54°C) and spray contents into a fire.

6. ACCIDENTAL RELEASE MEASURES

Flammable Liquid! Release causes an immediate fire or explosion hazard. Do not touch or walk through spilled material. Prevent spilled material from entering waterways, sewers, basements, or confined area.
Mop up or sweep up with absorbent. Use only non-sparking tools to collect absorbed material. Avoid contact with spilled or released material.
Immediately remove all contaminated clothing. (For disposal, see Section 13.)

7. HANDLING AND STORAGE

Avoid eye contact. Avoid repeated or prolonged skin contact. Avoid breathing spray mist. Do not spray near arcs or flames. Use only in well ventilated areas. Wash thoroughly after handling.
Storage Level 3 Aerosols per NFPA 30B

MAGNAFLUX
A Division of Illinois Tool Works Inc.
3624 WEST LAKE AVENUE ■ GLENVIEW, ILLINOIS 60026
TEL 847.657.5300 ■ FAX 847.657.5388
www.magnaflux.com

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Controls: Use where ventilation will carry spray mist away from occupied areas.

Personal protection: Wear safety glasses to protect eyes. Wear nitrile rubber gloves if hand exposure is unavoidable. Respirator with solvent vapor absorbing cartridge if used in enclosed, unventilated space. Warning: Use of this material in spaces without adequate ventilation may result in generation of hazardous levels of flammable vapors and/or inadequate oxygen levels for breathing. Odor is an inadequate warning for hazardous conditions.

9. PHYSICAL PROPERTIES

Initial boiling point (bulk):	Min. 245°F (118°C) (ASTM D-86)	*Vapor pressure:*	12 and 16 oz.Aerosol: 105psi @ 75°F(24°C) Bulk: 1.5 – 2.0 kPa at 20°C/68.0°F
VOC Content (EPA Method 24):	750 g/L	*Vapor density:*	4.1
Density/sp. gravity:	0.76	*Evaporation rate:*	Fast
Water solubility:	0	*Appearance:*	Clear, colorless liquid
pH:	Neutral	*Odor:*	Naphtha odor

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of use

Incompatibility: Avoid heat, sparks, open flames and other ignition sources. Avoid strong oxidizing agents.

Hazardous decomposition products: A complex mixture of airborne solids, liquids, and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

Reactivity: None

11. TOXICOLOGICAL INFORMATION

Carcinogenicity: Contains no known or suspected carcinogens listed with OSHA, IARC, NTP, or ACGIH.

Threshold limit value: 300 ppm

WHMIS information (Canada): According to available information, the ingredients have not been found to show reproductive toxicity, teratogenicity, mutagenicity, skin sensitization, or synergistic toxic effects with other materials.

12. ECOLOGICAL INFORMATION

No data is available on SKC-S. It floats on water. Components will evaporate rapidly.

13. DISPOSAL

As hazardous waste, send to licensed waste handler who can blend it into secondary fuels.

RCRA: Hazardous waste.

U.S. EPA Waste Number: D001

14. TRANSPORTATION

U.S. DOT: 49 CFR 172.101 Hazardous Materials Table

	Non-Aerosol	Aerosol
Proper shipping name:	Petroleum distillates, n.o.s.	Consumer Commodity
Hazard class or division:	3	ORM-D
Identification No.:	UN1268	None
Packing Group:	II	None

IATA: List of Dangerous Goods	Non-Aerosol	Aerosol
Proper shipping name:	Petroleum distillates, n.o.s.	Aerosols, flammable
Hazard class or division:	3	2.1
Identification No.:	UN1268	UN1950
Packing Group:	II	-

IMDG: General Index	Non-Aerosol	Aerosol
Proper shipping name:	PETROLEUM DISTILLATES,N.O.S.	AEROSOLS
Hazard class of division:	3.2	2.1
Identification No.:	UN1268	UN1950
Packing Group:	II	-

15. REGULATORY INFORMATION

TSCA: All ingredients are listed in TSCA inventory.

Canadian DSL: All ingredients are listed in the Canadian DSL

CERCLA: VM&P Naphtha (64742-89-8) Reportable Quantity 66,667 lbs.

SARA TITLE III, Section 313: Xylene, Mixed Isomer (1330-20-7) <0.13%; meta-Xylene (108-38-3)< 0.05%; Ethylbenzene (100-41-4)< 0.1%; Benzene (71-43-2) <0.005%; Toluene (108-88-3) <0.1%, Naphthalene: <0.002%

California Proposition 65: Warning: This material may contain trace amounts of chemicals known to the state of California to cause cancer and/or birth defects and/or reproductive harm.

WHMIS Class (Canada): Non-Aerosol: B-2, D-2B; Aerosol: A, B-5, D-2B

Note: This MSDS has been prepared to meet WHMIS (Canada) requirements with the exception of using 16 headings.

16. OTHER INFORMATION

Revision Statement: Section 7

Supersedes: June 23, 2009

Prepared by: Tamie Simmons, Research Manager

MAGNAFLUX
A Division of Illinois Tool Works Inc.
3624 WEST LAKE AVENUE ■ GLENVIEW, ILLINOIS 60026
TEL 847.657.5300 ■ FAX 847.657.5388
www.magnaflux.com

Developer

Section 1: IDENTIFICATION

1.1 PRODUCT IDENTIFIER

Product Name: SKD-S2

Product Code: Not available.

1.2 RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE

Use: Non-Destructive Testing.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Name/Address: Magnaflux
155 Harlem Avenue,
Glenview, Illinois
60025

Telephone Number: 847-657-5300

1.4 EMERGENCY TELEPHONE NUMBER

Emergency Telephone Number: CHEMTREC 800-424-9300

Date of Preparation: November 25, 2013 **Version #:** 1.1

Section 2: HAZARD(S) IDENTIFICATION

2.1 CLASSIFICATION OF THE CHEMICAL ACCORDING TO OSHA HAZCOM 2012

Hazard class

Flammable Liquid 2
Eye irritation 2A
Specific target organ toxicity - Single exposure 3
Specific target organ toxicity - Repeated exposure 1

2.2 LABEL ELEMENTS ACCORDING TO OSHA HAZCOM 2012

Hazard Pictogram:

Signal Word: Danger

Hazard Statement: Highly flammable liquid and vapor. Causes serious eye irritation. May cause drowsiness or dizziness. Causes damage to lungs through prolonged or repeated exposure.

Prevention: Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/ lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective

	gloves/eye protection/face protection. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.
Response:	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
Storage:	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Keep cool.
Disposal:	Dispose of contents and container in accordance with all local, regional, national and international regulations.

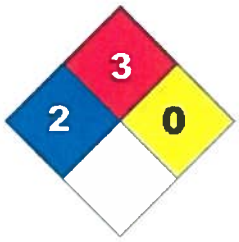
2.3 ADDITIONAL INFORMATION

Hazards not otherwise classified: Not applicable.

11 % of the mixture consists of ingredient(s) of unknown acute toxicity.

This product is a hazardous chemical as defined by NOM-018-STPS-2000.

Mexico Classification:



Blue = Health **Red = Flammability** **Yellow = Reactivity** **White = Special**

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):

Class B2 - Flammable Liquid
Class D2A - Chronic Toxic Effects
Class D2B - Eye Irritant

WHMIS Hazard Symbols:

WHMIS Signal Word: DANGER

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 MIXTURES

Ingredient	UN #	H / F/ R / *	CAS No	Wt. %
Isopropanol	UN1219	1/3/0	67-63-0	40 - 70
Acetone	UN1090	1/3/0	67-64-1	10 - 30
Ceramic materials and wares, chemicals	Not available.	Not available.	66402-68-4	5 - 10
Talc	Not available.	Not available.	14807-96-6	1 - 5
Silica, crystalline, quartz	Not available.	Not available.	14808-60-7	< 0.1

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

* Per NOM-018-STPS-2000

Section 4: FIRST- AID MEASURES

4.1 DESCRIPTION OF THE FIRST AID MEASURE

Eye: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, including under lids. If easy to do, remove contact lenses, if worn. Get medical attention immediately.

Skin: In case of contact, immediately flush skin with plenty of water. Call a physician if irritation develops and persists.

Inhalation: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Eye: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin: May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Inhalation: May cause respiratory tract irritation. May cause drowsiness or dizziness.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENTS NEEDED

Note to Physicians: Symptoms may not appear immediately.

Specific Treatments: In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

Section 5: FIRE-FIGHTING MEASURES

5.1 FLAMMABILITY

Flammability: Flammable by WHMIS/OSHA/NOM-018-STPS-2000 criteria.

5.2 EXTINGUISHING MEDIA

Suitable Extinguishing Media: Water, foam, carbon dioxide.

Unsuitable Extinguishing Media: Not available.

5.3 SPECIAL HAZARDS ARISING FROM THE CHEMICAL

Products of Combustion: May include, and are not limited to: oxides of carbon.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

5.4 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS

Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray to keep fire-exposed containers cool.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition.

6.2 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING - UP

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Cleaning-Up: Scoop up material and place in a disposal container. Provide ventilation.

Section 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Handling: Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist /vapors/spray. Do not swallow. Handle and open container with care. Use only outdoors or in a well-ventilated area. When using do not eat, drink or smoke. Use only non-sparking tools. (See section 8)

General Hygiene Advice: Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage: Keep out of the reach of children. Keep container tightly closed. Store in a cool, well ventilated area. Keep away from sources of ignition. Store locked up. (See section 10)

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Exposure Guidelines

Occupational Exposure Limits		
Ingredient	**OSHA-PEL**	**ACGIH-TLV**
Isopropanol	400 ppm	200 ppm
Acetone	1000 ppm TWA; 2400 mg/m^3 TWA	500 ppm
Ceramic materials and wares, chemicals	5 mg/m^3	Not available.
Talc	20 mppcf	2 mg/m^3 (resp)
Silica, crystalline, quartz	((10 mg/m^3)/(%SiO_2+2) TWA (resp)) ((30 mg/m^3)/(%SiO_2+2) TWA (total)) ((250)/(%SiO_2+5) mppcf TWA (resp))	0.025 mg/m^3

8.2 EXPOSURE CONTROLS

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

8.3 INDIVIDUAL PROTECTIVE MEASURES

Personal Protective Equipment:

Eye/Face Protection: Safety glasses or goggles are recommended when using product.

Skin Protection:

Hand Protection: Chemical-resistant gloves.

Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

General Health and Safety Measures: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White liquid.

Color: White.

Odor: Alcohol.

Odor Threshold: Not available.

Physical State: Liquid.

pH: Neutral.

Melting Point/Freezing Point: Not available.

Initial Boiling Point and Boiling Range: ~ 55 °C (~ 132 °F)

Flash Point:	~ -16 °C (~ 2 °F)
Evaporation Rate:	0.4 (Ether = 1)
Flammability:	Flammable.
Lower Flammability/Explosive Limit:	2 %
Upper Flammability/Explosive Limit:	15 %
Vapor Pressure:	150 mm @ 38°C (100 °F)
Vapor Density:	3
Relative Density/Specific Gravity:	0.87
Solubility:	Partial.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	Not available.
Oxidizing Properties:	Not available.
Explosive Properties:	Not available.

Section 10: STABILITY AND REACTIVITY

10.1 REACTIVITY

No dangerous reaction known under conditions of normal use.

10.2 CHEMICAL STABILITY

Stable under normal storage conditions.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No dangerous reaction known under conditions of normal use.

10.4 CONDITIONS TO AVOID

Heat. Incompatible materials. Sources of ignition.

10.5 INCOMPATIBLE MATERIALS

Strong oxidizing agents.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

May include, and are not limited to: oxides of carbon.

Section 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Symptoms related to physical/chemical/toxicological characteristics:

Eye: Causes serious eye irritation. Symptoms may include discomfort or pain,

excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin: May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Inhalation: May cause respiratory tract irritation. May cause drowsiness or dizziness.

Acute Toxicity:

Ingredient	IDLH	LC50	LD50
Isopropanol	2,000 ppm	Inhalation 72.6 mg/L 4h, rat	Oral 4396 mg/kg, rat Dermal 12800 mg/kg, rat Dermal 12870 mg/kg, rabbit
Acetone	2,500 ppm	Inhalation 50100 mg/m^3 8h, rat	Oral 5800 mg/kg, rat
Ceramic materials and wares, chemicals	Not available.	Not available.	Oral > 2000 mg/kg, rat Dermal > 2500 mg/kg, rabbit
Talc	1,000 mg/m^3	Not available.	Not available.
Silica, crystalline, quartz	25 mg/m^3 (Cristobalite & Tridymite) 50 mg/m^3 (Quartz & Tripoli)	Not available.	Oral 500 mg/kg, rat

Calculated overall Chemical Acute Toxicity Values		
LC50 (inhalation)	**LD50 (oral)**	**LD50 (dermal)**
> 20 mg/L 4h, rat	> 2000 mg/kg, rat	> 2000 mg/kg, rabbit

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen (NTP, IARC, OSHA, ACGIH, CP65)*
Isopropanol	G-A4, I-3
Acetone	G-A4
Ceramic materials and wares, chemicals	Not listed.
Talc	G-A4, I-3
Silica, crystalline, quartz	G-A2, I-1, N-1, O, CP65

* See Section 15 for more information.

11.2 DELAYED, IMMEDIATE, AND CHRONIC EFFECTS OF SHORT- AND LONG-TERM EXPOSURE

Skin Corrosion/Irritation: Based on available data, the classification criteria are not met.

Serious Eye Damage/Irritation: Causes serious eye irritation.

Respiratory Sensitization: Based on available data, the classification criteria are not met.

Skin Sensitization: Based on available data, the classification criteria are not met.

STOT-Single Exposure: May cause drowsiness or dizziness.

Chronic Health Effects:

Carcinogenicity: Based on available data, the classification criteria are not met.

Germ Cell Mutagenicity: Based on available data, the classification criteria are not met.

Reproductive Toxicity:

Developmental: Based on available data, the classification criteria are not met.

Teratogenicity: Based on available data, the classification criteria are not met.

Embryotoxicity: Based on available data, the classification criteria are not met.

Fertility: Based on available data, the classification criteria are not met.

STOT-Repeated Exposure: Causes damage to lungs through prolonged or repeated exposure.

Aspiration Hazard: Based on available data, the classification criteria are not met.

Toxicologically Synergistic Materials: Not available.

Other Information: Not available.

Section 12: ECOLOGICAL INFORMATION

12.1 ECOTOXICITY

Acute/Chronic Toxicity: May cause long-term adverse effects in the aquatic environment.

12.2 PERSISTENCE AND DEGRADABILITY

Not available.

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: Not available.

12.4 MOBILITY IN SOIL

Not available.

12.5 OTHER ADVERSE EFFECTS

Not available.

Section 13: DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Disposal Method: This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Other disposal recommendations: Not available.

Section 14: TRANSPORT INFORMATION

DOT	UN 1993, Flammable Liquid, n.o.s. (Isopropanol, acetone), 3, II
IATA	UN 1993, Flammable liquid, n.o.s., (Isopropanol, Acetone),3, II (CAO)
IMDG	UN 1993, Flammable Liquid, n.o.s. (Isopropanol, acetone), 3, II (non-bulk)

Section 15: REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/ LEGISLATIONS SPECIFIC FOR THE CHEMICAL

Canada: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

US: MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

Mexico: MSDS prepared pursuant to NOM-018-STPS-2000.

SARA Title III				
Ingredient	**Section 302 (EHS) TPQ (lbs.)**	**Section 304 EHS RQ (lbs.)**	**CERCLA RQ (lbs.)**	**Section 313**
Isopropanol	Not listed.	Not listed.	Not listed.	313
Acetone	Not listed.	Not listed.	5,000	Not listed.
Ceramic materials and wares, chemicals	Not listed.	Not listed.	Not listed.	Not listed.
Talc	Not listed.	Not listed.	Not listed.	Not listed.
Silica, crystalline, quartz	Not listed.	Not listed.	Not listed.	Not listed.

State Regulations

California Proposition 65:

This product contains a chemical known to the State of California to cause cancer.

Global Inventories:

Ingredient	**Canada DSL/NDSL**	**USA TSCA**
Isopropanol	DSL	Yes.
Acetone	DSL	Yes.
Ceramic materials and wares, chemicals	DSL	Yes.
Talc	DSL	Yes.
Silica, crystalline, quartz	DSL	Yes.

NFPA-National Fire Protection Association:	
Health:	2
Fire:	3
Reactivity:	0

HMIS-Hazardous Materials Identification System:	
Health:	2*
Fire:	3
Physical Hazard:	0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

CP65 **California Proposition 65**

OSHA (O) **Occupational Safety and Health Administration.**

ACGIH (G) **American Conference of Governmental Industrial Hygienists.**
A1 - Confirmed human carcinogen.
A2 - Suspected human carcinogen.
A3 - Animal carcinogen.
A4 - Not classifiable as a human carcinogen.
A5 - Not suspected as a human carcinogen.

IARC (I) **International Agency for Research on Cancer.**
1 - The agent (mixture) is carcinogenic to humans.
2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) **National Toxicology Program.**
1 - Known to be carcinogens.
2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Date of Preparation:	November 25, 2013
Expiry Date:	November 25, 2016
Version:	1.1
Revision Date:	June 9, 2015

Conforms to OSHA HazCom 2012, CPR & NOM-018-STPS-2000 Standards

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

Prepared by: Nexreg Compliance Inc.
Phone: (519) 488-5126
www.nexreg.com

Prepared for: Magnaflux

End of Safety Data Sheet

MAGNAFLUX

SAFETY DATA SHEET

Penetrant

Section 1: IDENTIFICATION

1.1 PRODUCT IDENTIFIER

Product Name: SKL-SP2

Product Code: Not available.

1.2 RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE

Use: Non-Destructive Testing.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Name/Address: Magnaflux
155 Harlem Avenue,
Glenview, Illinois
60025

Telephone Number: 847-657-5300

1.4 EMERGENCY TELEPHONE NUMBER

Emergency Telephone Number: CHEMTREC 800-424-9300

Date of Preparation: November 25, 2013 **Version #:** 1.0

Section 2: HAZARD(S) IDENTIFICATION

2.1 CLASSIFICATION OF THE CHEMICAL ACCORDING TO OSHA HAZCOM 2012

Hazard class

Carcinogenicity 2
Reproductive toxicity 2
Aspiration hazard 1

2.2 LABEL ELEMENTS ACCORDING TO OSHA HAZCOM 2012

Hazard Pictogram:

Signal Word: Danger

Hazard Statement: Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May be fatal if swallowed and enters airways.

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection.

Response: If exposed or concerned: Get medical advice/attention. If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting.

Storage: Store locked up.

Disposal: Dispose of contents and container in accordance with all local, regional, national and international regulations.

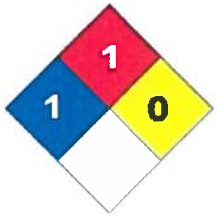
2.3 ADDITIONAL INFORMATION

Hazards not otherwise classified: Not applicable.

4 % of the mixture consists of ingredient(s) of unknown acute toxicity.

This product is a hazardous chemical as defined by NOM-018-STPS-2000.

Mexico Classification:



Blue = Health Red = Flammability Yellow = Reactivity White = Special

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):

Class D2A - Carcinogenicity
Class D2A - Reproductive Toxicity
Class D2A - Teratogenicity and Embryotoxicity

WHMIS Hazard Symbols:

WHMIS Signal Word: CAUTION

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 MIXTURES

Ingredient	UN #	H / F/ R / *	CAS No	Wt. %
White mineral oil, petroleum	Not available	Not available	8042-47-5	60 - 100
Distillates (petroleum), hydrotreated light naphthenic	Not available	Not available	64742-53-6	3 - 7
2-Naphthalenol, 1-[[4-(phenylazo)phenyl] azo]-, ar-heptyl ar',ar''-Me derivs.	Not available	Not available	92257-31-3	3 - 7
Xylene	UN1307	2/3/0	1330-20-7	0.1 - 1
Ethylbenzene	UN1175	2/3/0	100-41-4	0.1 - 1

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

* Per NOM-018-STPS-2000

Section 4: FIRST- AID MEASURES

4.1 DESCRIPTION OF THE FIRST AID MEASURE

Eye: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, including under lids. If easy to do, remove contact lenses, if worn. Get medical attention immediately.

Skin: In case of contact, immediately flush skin with plenty of water. Call a physician if irritation develops and persists.

Inhalation: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Eye: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin: May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Inhalation: May cause respiratory tract irritation. May cause drowsiness or dizziness.

Ingestion: May be fatal if swallowed and enters airways. May cause stomach distress, nausea or vomiting. This product may be aspirated into the lungs and cause chemical pneumonitis.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENTS NEEDED

Note to Physicians: Symptoms may not appear immediately.

Specific Treatments: In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

Section 5: FIRE-FIGHTING MEASURES

5.1 FLAMMABILITY

Flammability: Not flammable by WHMIS/OSHA/NOM-018-STPS-2000 criteria

5.2 EXTINGUISHING MEDIA

Suitable Extinguishing Media: Foam, carbon dioxide.

Unsuitable Extinguishing Media: Water.

5.3 SPECIAL HAZARDS ARISING FROM THE CHEMICAL

Products of Combustion: May include, and are not limited to: oxides of carbon, oxides of nitrogen

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

5.4 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS

Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray to keep fire-exposed containers cool. Avoid water in straight hose stream; will scatter and spread fire.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition.

6.2 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING - UP

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Cleaning-Up: Scoop up material and place in a disposal container. Provide ventilation.

Section 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Handling: Avoid contact with skin and eyes. Avoid breathing vapor or mist. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. (See section 8)

General Hygiene Advice: Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage: Keep out of the reach of children. Keep container tightly closed. Store in a well-ventilated place. Store locked up. (See section 10)

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Exposure Guidelines

Occupational Exposure Limits		
Ingredient	**OSHA-PEL**	**ACGIH-TLV**
White mineral oil, petroleum	Not available.	Not available.
Distillates (petroleum), hydrotreated light naphthenic	5 mg/m³ (mist)	5 mg/m³ (mist)
2-Naphthalenol, 1-[[4-(phenylazo)phenyl]azo]-, ar-heptyl ar',ar''-Me derivs.	Not available.	Not available.
Xylene	100 ppm	100 ppm
Ethylbenzene	100 ppm	20 ppm

8.2 EXPOSURE CONTROLS

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

8.3 INDIVIDUAL PROTECTIVE MEASURES

Personal Protective Equipment:

Eye/Face Protection: Safety glasses or goggles are recommended when using product.

Skin Protection:

Hand Protection: Chemical-resistant gloves.

Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

General Health and Safety Measures: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Oily.
Color:	Dark red.
Odor:	Mild oily odor.
Odor Threshold:	Not available.
Physical State:	Liquid.
pH:	Neutral.
Melting Point/Freezing Point:	Not available.
Initial Boiling Point and Boiling Range:	~ 235 °C (~ 455 °F)
Flash Point:	> 93 °C (> 200 °F)
Evaporation Rate:	Negligible.
Flammability:	Not flammable.
Lower Flammability/Explosive Limit:	1%
Upper Flammability/Explosive Limit:	6%
Vapor Pressure:	< 0.10 mm @ 21°C (70 °F)
Vapor Density:	>1 (Air= 1)
Relative Density/Specific Gravity:	0.89
Solubility:	Insoluble
Partition coefficient: n-octanol/water:	Not available.

Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	4 cSt
Oxidizing Properties:	Not available.
VOC Content (%)	39.5
Explosive Properties:	Not available.

Section 10: STABILITY AND REACTIVITY

10.1 REACTIVITY

No dangerous reaction known under conditions of normal use.

10.2 CHEMICAL STABILITY

Stable under normal storage conditions.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No dangerous reaction known under conditions of normal use.

10.4 CONDITIONS TO AVOID

Heat. Incompatible materials.

10.5 INCOMPATIBLE MATERIALS

None known.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

May include, and are not limited to: oxides of carbon, oxides of nitrogen.

Section 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Symptoms related to physical/chemical/toxicological characteristics:

Eye: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin: May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Ingestion: May be fatal if swallowed and enters airways. May cause stomach distress, nausea or vomiting. This product may be aspirated into the lungs and cause chemical pneumonitis.

Inhalation: May cause respiratory tract irritation. May cause drowsiness or dizziness.

Acute Toxicity:

Ingredient	IDLH	LC50	LD50
White mineral oil, petroleum	Not available.	Not available.	Oral >5000 mg/kg, rat Dermal >2000 mg/kg, rabbit

Distillates (petroleum), hydrotreated light naphthenic	Not available.	Inhalation <5.7 mg/L 4h, rat	Oral >5000 mg/kg, rat Dermal >2000 mg/kg, rabbit
2-Naphthalenol, 1-[[4-(phenylazo)phenyl]azo]-, ar-heptyl ar',ar''-Me derivs.	Not available.	Not available.	Not available.
Xylene	900 ppm	Inhalation 5000 ppm 4h, rat	Oral 4300 mg/kg, rat Dermal >1700 mg/kg, rabbit
Ethylbenzene	800 ppm	Inhalation 17.2 mg/L 4h, rat	Oral 3500 mg/kg, rat Dermal 15354 mg/kg, rabbit

Calculated overall Chemical Acute Toxicity Values		
LC50 (inhalation)	**LD50 (oral)**	**LD50 (dermal)**
Not available.	> 2000 mg/kg, rat	> 2000 mg/kg, rabbit

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen (NTP, IARC, OSHA, ACGIH, CP65)*
White mineral oil, petroleum	Not listed.
Distillates (petroleum), hydrotreated light naphthenic	Not listed.
2-Naphthalenol, 1-[[4-(phenylazo)phenyl]azo]-, ar-heptyl ar',ar''-Me derivs.	Not listed.
Xylene	G-A4, I-3
Ethylbenzene	O, G-A3, I-2B, CP65

* See Section 15 for more information.

11.2 DELAYED, IMMEDIATE, AND CHRONIC EFFECTS OF SHORT- AND LONG-TERM EXPOSURE

Skin Corrosion/Irritation: Based on available data, the classification criteria are not met.

Serious Eye Damage/Irritation: Based on available data, the classification criteria are not met.

Respiratory Sensitization: Based on available data, the classification criteria are not met.

Skin Sensitization: Based on available data, the classification criteria are not met.

STOT-Single Exposure: Based on available data, the classification criteria are not met.

Chronic Health Effects:

Carcinogenicity: Suspected of causing cancer.

Germ Cell Mutagenicity: Based on available data, the classification criteria are not met.

Reproductive Toxicity:

Developmental: Suspected of damaging the unborn child.

Teratogenicity: Hazardous by WHMIS/OSHA criteria.

Embryotoxicity: Hazardous by WHMIS/OSHA criteria.

Fertility: Suspected of damaging fertility.

STOT-Repeated Exposure: Based on available data, the classification criteria are not met.

Aspiration Hazard: May be fatal if swallowed and enters airways.

Toxicologically Synergistic Materials: Not available.

Other Information: Not available.

Section 12: ECOLOGICAL INFORMATION

12.1 ECOTOXICITY

Acute/Chronic Toxicity: May cause long-term adverse effects in the aquatic environment.

12.2 PERSISTENCE AND DEGRADABILITY

Not available.

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: Not available.

12.4 MOBILITY IN SOIL

Not available.

12.5 OTHER ADVERSE EFFECTS

Floats on water.

Section 13: DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Disposal Method: This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Other disposal recommendations: Not available.

Section 14: TRANSPORT INFORMATION

14.1 UN NUMBER

DOT	TDG	NOM-004-SCT2-1994
Not regulated.	Not regulated.	Not regulated.

14.2 UN PROPER SHIPPING NAME

DOT	TDG	NOM-004-SCT2-1994
Not applicable.	Not applicable.	Not applicable.

14.3 TRANSPORT HAZARD CLASS (ES)

DOT	TDG	NOM-004-SCT2-1994
Not applicable.	Not applicable.	Not applicable.

14.4 PACKING GROUP

DOT	TDG	NOM-004-SCT2-1994
Not applicable.	Not applicable.	Not applicable.

14.5 ENVIRONMENTAL HAZARDS

Not available.

14.6 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE

Not available.

14.7 SPECIAL PRECAUTIONS FOR USER

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

Section 15: REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/ LEGISLATIONS SPECIFIC FOR THE CHEMICAL

Canada: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.
US: MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

Mexico: MSDS prepared pursuant to NOM-018-STPS-2000.

SARA Title III				
Ingredient	**Section 302 (EHS) TPQ (lbs.)**	**Section 304 EHS RQ (lbs.)**	**CERCLA RQ (lbs.)**	**Section 313**
White mineral oil, petroleum	Not listed.	Not listed.	Not listed.	Not listed.
Distillates (petroleum), hydrotreated light naphthenic	Not listed.	Not listed.	Not listed.	Not listed.
2-Naphthalenol, 1-[[4-(phenylazo)phenyl]azo]-, ar-heptyl ar',ar''-Me derivs.	Not listed.	Not listed.	Not listed.	Not listed.
Xylene	Not listed.	Not listed.	100	313
Ethylbenzene	Not listed.	Not listed.	1,000	313

State Regulations

California Proposition 65:

This product contains a chemical known to the State of California to cause cancer.

Global Inventories:

Ingredient	Canada DSL/NDSL	USA TSCA
White mineral oil, petroleum	DSL	Yes.
Distillates (petroleum), hydrotreated light naphthenic	DSL	Yes.
2-Naphthalenol, 1-[[4-(phenylazo)phenyl]azo]-, ar-heptyl ar',ar''-Me derivs.	DSL	Yes.
Xylene	DSL	Yes.
Ethylbenzene	DSL	Yes.

NFPA-National Fire Protection Association:	
Health:	1
Fire:	1
Reactivity:	0

HMIS-Hazardous Materials Identification System:

Health:	1*
Fire:	1
Physical Hazard:	0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

CP65 **California Proposition 65**

OSHA (O) **Occupational Safety and Health Administration.**

ACGIH (G) **American Conference of Governmental Industrial Hygienists.**
A1 - Confirmed human carcinogen.
A2 - Suspected human carcinogen.
A3 - Animal carcinogen.
A4 - Not classifiable as a human carcinogen.
A5 - Not suspected as a human carcinogen.

IARC (I) **International Agency for Research on Cancer.**
1 - The agent (mixture) is carcinogenic to humans.
2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) **National Toxicology Program.**
1 - Known to be carcinogens.
2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Date of Preparation: November 25, 2013

Expiry Date: November 25, 2016

Version: 1.0

Revision Date: November 25, 2013

Conforms to OSHA HazCom 2012, CPR & NOM-018-STPS-2000 Standards

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

Prepared by: Nexreg Compliance Inc.
Phone: (519) 488-5126
www.nexreg.com

Prepared for: Magnaflux

End of Safety Data Sheet

ScienceLab.com
Chemicals & Laboratory Equipment

Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
Methyl ethyl ketone MSDS

Section 1: Chemical Product and Company Identification

Product Name: Methyl ethyl ketone

Catalog Codes: SLM2626, SLM3232

CAS#: 78-93-3

RTECS: EL6475000

TSCA: TSCA 8(b) inventory: Methyl ethyl ketone

CI#: Not applicable.

Synonym: 2-Butanone

Chemical Name: Methyl Ethyl Ketone

Chemical Formula: C4H8O

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Methyl ethyl ketone	78-93-3	100

Toxicological Data on Ingredients: Methyl ethyl ketone: ORAL (LD50): Acute: 2737 mg/kg [Rat]. 4050 mg/kg [Mouse]. DERMAL (LD50): Acute: 6480 mg/kg [Rabbit]. VAPOR (LC50): Acute: 23500 mg/m 8 hours [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation (lung irritant).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Classified POSSIBLE for human. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to gastrointestinal tract, upper respiratory tract, skin, eyes, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 404°C (759.2°F)

Flash Points: CLOSED CUP: -9°C (15.8°F). OPEN CUP: -5.5556°C (22°F) (Tag).

Flammable Limits: LOWER: 1.8% UPPER: 10%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances: Highly flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. Explosive in presence of oxidizing materials, of acids.

Fire Fighting Media and Instructions:
Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards:
Ignition on contact with potassium t-butoxide. Vapor may cause a flash fire

Special Remarks on Explosion Hazards:
Reaction with Hydrogen Peroxide + nitric acid forms heat and shock-sensitive explosive product. Mixture with 2-propanol will produce explosive peroxides during storage.

Section 6: Accidental Release Measures

Small Spill:
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill:
Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined

areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, metals, acids, alkalis.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 200 STEL: 300 (ppm) from ACGIH (TLV) [United States] [1999] TWA: 150 STEL: 300 (ppm) [Australia] TWA: 590 STEL: 885 (mg/m3) from NIOSH TWA: 200 STEL: 300 (ppm) from NIOSH TWA: 590 STEL: 885 (mg/m3) [Canada] TWA: 200 STEL: 300 (ppm) from OSHA (PEL) [United States] TWA: 590 STEL: 885 (mg/m3) from OSHA (PEL) [United States] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor:
Acetone-like Pleasant. Pungent. Sweetish. (Strong.)

Taste: Not available.

Molecular Weight: 72.12g/mole

Color: Clear Colorless.

pH (1% soln/water): Not available.

Boiling Point: 79.6 (175.3°F)

Melting Point: -86°C (-122.8°F)

Critical Temperature: 262.5°C (504.5°F)

Specific Gravity: 0.805(Water = 1)

Vapor Pressure: 10.3 kPa (@ 20°C)

Vapor Density: 2.41 (Air = 1)

Volatility: Not available.

Odor Threshold: 0.25 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 0.3

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether, acetone.

Solubility: Soluble in cold water, diethyl ether, acetone.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources, mechanical shock, incompatible materials.

Incompatibility with various substances: Reactive with oxidizing agents, metals, acids, alkalis.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Incompatible with chloroform, copper, hydrogen peroxide, nitric acid, potassium t-butoxide, 2-propanol, chlorosulfonic acid, strong oxidizers, amines, ammonia, inorganic acids, isocyanates, caustics, pyrindines. Vigorous reaction with chloroform +alkali.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 2737 mg/kg [Rat]. Acute dermal toxicity (LD50): 6480 mg/kg [Rabbit]. Acute toxicity of the vapor (LC50): 32000 mg/m3 4 hours [Mouse].

Chronic Effects on Humans:
MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Classified POSSIBLE for human. May cause damage to the following organs: gastrointestinal tract, upper respiratory tract, skin, eyes, central nervous system (CNS).

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation (lung irritant).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: May cause birth defects based on animal dats. Embryotoxic and/or foetotoxic in animal.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Causes skin irritation. May be absorbed through the skin. Eyes: Causes eye irritation. Inhalation: Inhalation of high concentrations may cause central nervous effects characterized by headache, dizziness, unconsciousness, and coma. Causes respiratory tract irritation and affects the sense organs. May affect the liver and urinary system. Ingestion: Causes gastrointestinal tract irritation with nausea, vomiting and diarrhea. May affect the liver. Chronic Potential Health Effects: Chronic inhalation may cause effects similar to those of acute inhalation. Prolonged or repeated skin contact may cause defatting and dermatitis.

Section 12: Ecological Information

Ecotoxicity: Ecotoxicity in water (LC50): 3220 mg/l 96 hours [Fathead Minnow]. 1690 mg/l 96 hours [Bluegill].

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Ethyl methyl ketone UNNA: 1193 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
New York release reporting list: Methyl ethyl ketone Rhode Island RTK hazardous substances: Methyl ethyl ketone Pennsylvania RTK: Methyl ethyl ketone Minnesota: Methyl ethyl ketone Massachusetts RTK: Methyl ethyl ketone New Jersey: Methyl ethyl ketone California Director's list of Hazardous Substances: Methyl ethyl ketone TSCA 8(b) inventory: Methyl ethyl ketone TSCA 8(d) H and S data reporting: Methyl ethyl ketone: Effective: 10/4/82; Sunset: 10/4/92 SARA 313 toxic chemical notification and release reporting: Methyl ethyl ketone CERCLA: Hazardous substances.: Methyl ethyl ketone: 5000 lbs. (2268 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R11- Highly flammable. R36/37- Irritating to eyes and respiratory system. S9- Keep container in a well-ventilated place. S16- Keep away from sources of ignition - No smoking. S25- Avoid contact with eyes. S33- Take precautionary measures against static discharges.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 08:39 PM

Last Updated: 05/21/2013 12:00 PM

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Safety Data Sheet
prepared to UN GHS Revision 3

1. Identification of the Substance/Mixture and the Company/Undertaking

1.1	**Product Identifier**	0249C1NL		
	Product Name:	CARBOZINC HS ACTIVATOR	**Revision Date:**	05/30/2015
1.2	**Relevant identified uses of the substance or mixture and uses advised against**	Component of multicomponent industrial coatings - Industrial use.	**Supercedes Date:**	29/05/2015

1.3 **Details of the supplier of the safety data sheet**

Manufacturer:

Carboline Company
2150 Schuetz Road
St. Louis, MO USA 63146

Regulatory / Technical Information:
Contact Carboline Technical Services at
1-800-848-4645

Datasheet Produced by: Schlereth, Ken - ehs@stoncor.com

1.4 **Emergency telephone number:**

CHEMTREC 1-800-424-9300 (Inside US)
CHEMTREC +1 703 5273887 (Outside US)
HEALTH - Pittsburgh Poison Control 1-412-681-6669

2. Hazard Identification

2.1 **Classification of the substance or mixture**

Serious Eye Damage, category 1
Flammable Liquid, category 3
Reproductive Toxicity, category 1A
STOT, single exposure, category 3, NE
Skin Irritation, category 2

2.2 Label elements

Symbol(s) of Product

Signal Word

Danger

Named Chemicals on Label

PROPYLENE GLYCOL MONOMETHYL ETHER, 2-METHOXY-1-PROPANOL, TETRABUTYL TITANATE

GHS HAZARD STATEMENTS

Flammable Liquid, category 3	H226	Flammable liquid and vapour.
Skin Irritation, category 2	H315	Causes skin irritation.
Serious Eye Damage, category 1	H318	Causes serious eye damage.
STOT, single exposure, category 3, NE	H336	May cause drowsiness or dizziness.
Reproductive Toxicity, category 1A	H360-1A	May damage fertility or the unborn child.

GHS PRECAUTION PHRASES

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/ face protection.
P284	Wear respiratory protection.
P301+310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention
P332+313	If skin irritation occurs: Get medical advice/attention.
P403+233	Store in a well-ventilated place. Keep container tightly closed.

2.3 Other hazards

Not applicable

Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

3. Composition/Information On Ingredients

3.2 Mixtures

Hazardous Ingredients

CAS-No.	Chemical Name	%
107-98-2	PROPYLENE GLYCOL MONOMETHYL ETHER	75-100

5593-70-4	TETRABUTYL TITANATE	10-25
7646-85-7	ZINC CHLORIDE	1.0-2.5
1589-47-5	2-METHOXY-1-PROPANOL	0.1-1.0

CAS-No.	GHS Symbols	GHS Hazard Statements	M-Factors
107-98-2	GHS02-GHS07	H226-336	0
5593-70-4	GHS02-GHS05-GHS07	H226-315-318-335-336	0
7646-85-7	GHS05-GHS07	H302-314-413	0
1589-47-5	GHS02-GHS05-GHS07-GHS08	H226-315-318-335-360	0

Additional Information: The text for GHS Hazard Statements shown above (if any) is given in Section 16.

4. First-aid Measures

4.1 Description of First Aid Measures

AFTER INHALATION: Give oxygen or artificial respiration if needed. Remove person to fresh air. If signs/symptoms continue, get medical attention.
AFTER SKIN CONTACT: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If skin irritation persists, call a physician.
AFTER EYE CONTACT: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
AFTER INGESTION: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If swallowed, call a poison control centre or doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed. Irritating to eyes and skin. Risk of serious damage to the lungs (by aspiration). Vapours may cause drowsiness and dizziness.

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

5. Fire-fighting Measures

5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable liquid. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Vapors may travel to areas away from work site before igniting/flashing back to vapor source. Provide adequate ventilation. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Electrical installations / working materials must comply with the technological safety standards. Wear shoes with conductive soles.

5.2 Special hazards arising from the substance or mixture

No Information

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. Cool containers / tanks with water spray. Flammable.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

For personal protection see section 8. Ensure adequate ventilation. Ensure adequate ventilation. Evacuate personnel to safe areas. Evacuate personnel to safe areas. Remove all sources of ignition. Remove all sources of ignition. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Wear personal protective equipment.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains.

6.3 Methods and material for containment and cleaning up

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

Please refer to disposal requirements or country specific disposal requirements for this material. See Section 13 for further information.

7. Handling and Storage

7.1 Precautions for safe handling

INSTRUCTIONS FOR SAFE HANDLING : Keep containers dry and tightly closed to avoid moisture absorption and contamination. Prepare the working solution as given on the label(s) and/or the user instructions. Do not breathe vapours or spray mist. Ensure all equipment is electrically grounded before beginning transfer operations. Do not use sparking tools. Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation/personal protection.
PROTECTION AND HYGIENE MEASURES : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: Heat, flames and sparks.
STORAGE CONDITIONS: Keep container closed when not in use. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

7.3 Specific end use(s)

No specific advice for end use available.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits (US)

Name	%	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	OEL Note
PROPYLENE GLYCOL MONOMETHYL ETHER	75-100	100 PPM	150 PPM	360 MGM3	N/E	
TETRABUTYL TITANATE	10-25	N/E	N/E	N/E	N/E	
ZINC CHLORIDE	1.0-2.5	1 MGM3	2 MGM3	1 MGM3	N/E	
2-METHOXY-1-PROPANOL	0.1-1.0	N/E	N/E	N/E	N/E	

FURTHER INFORMATION: Refer to the regulatory exposure limits for the workforce enforced in each country.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: In order to avoid inhalation of spray-mist and sanding dust, all spraying and sanding must be done wearing adequate respirator. Use only with ventilation to keep levels below exposure guidelines reported in this document. User should test and monitor exposure levels to ensure all personnel are below guidelines. If not sure, or not able to monitor, use State or federally approved supplied air respirator. For silica containing coatings in a liquid state, and/or if no exposure limits are established above, air-supplied respirators are generally not required.
EYE PROTECTION: Safety glasses with side-shields.

HAND PROTECTION: Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Impervious glovesRequest information on glove permeation properties from the glove supplier.

OTHER PROTECTIVE EQUIPMENT: Ensure that eyewash stations and safety showers are close to the workstation location. Lightweight protective clothing

ENGINEERING CONTROLS: Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Clear, Water Thin Liquid
Physical State	Liquid
Odor	Solvent
Odor threshold	
pH	N/D
Melting point / freezing point (°C)	N/D
Boiling point/range (°C)	243 F (117 C) - 248 F (120 C)
Flash Point, (°C)	33
Evaporation rate	
Flammability (solid, gas)	
Upper/lower flammability or explosive limits	Not determined
Vapour Pressure, mmHg	N/D
Vapour density	
Relative density	
Solubility in / Miscibility with water	N/D
Partition coefficient: n-octanol/water	
Auto-ignition temperature (°C)	
Decomposition temperature (°C)	
Viscosity	Unknown
Explosive properties	
Oxidising properties	

9.2 Other information

VOC Content g/l:	288
Specific Gravity (g/cm3)	0.94

10. Stability and Reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions
Hazardous polymerisation does not occur.

10.4 Conditions to avoid
Heat, flames and sparks.

10.5 Incompatible materials
Strong oxidizing agents.

10.6 Hazardous decomposition products
Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke.

11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:

Oral LD50: N/D

Inhalation LC50: N/D

Irritation: Unknown

Corrosivity: Unknown

Sensitization: Unknown

Repeated dose toxicity: Unknown

Carcinogenicity: Unknown

Mutagenicity: Unknown

Toxicity for reproduction: Unknown

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
107-98-2	PROPYLENE GLYCOL MONOMETHYL ETHER	4016 mg/kg, oral, rat	13536 mg/kg, dermal, rabbit	10000 ppm/4hrs rat, inhalation
5593-70-4	TETRABUTYL TITANATE	3122 mg/kg, oral, rat		Not Available
7646-85-7	ZINC CHLORIDE	1100 mg/lit oral, rat		1975 mg/m3 inhalation, rat
1589-47-5	2-METHOXY-1-PROPANOL	5710 mg/kg, oral, rat	5660 mg/kg, dermal, rabbit	1600 ppm / 4h, inh, rat

Additional Information:

Harmful if swallowed. Irritating to eyes and skin. Risk of serious damage to the lungs (by aspiration). Vapours may cause drowsiness and dizziness.

12. Ecological Information

12.1 Toxicity:

EC50 48hr (Daphnia):	Unknown
IC50 72hr (Algae):	Unknown
LC50 96hr (fish):	Unknown

12.2	**Persistence and degradability:**	Unknown
12.3	**Bioaccumulative potential:**	Unknown
12.4	**Mobility in soil:**	Unknown
12.5	**Results of PBT and vPvB assessment:**	The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.
12.6	**Other adverse effects:**	Unknown

CAS-No.	Chemical Name	EC50 48hr	IC50 72hr	LC50 96hr
107-98-2	PROPYLENE GLYCOL MONOMETHYL ETHER	23300 mg/l (Water flea)	No information	20800 mg/l (Fish)
5593-70-4	TETRABUTYL TITANATE	No information	No information	No information
7646-85-7	ZINC CHLORIDE	No information	No information	No information
1589-47-5	2-METHOXY-1-PROPANOL	19000 mg/l (Daphnia magna)	No Information	4998 mg/l (Fish)

13. Disposal Considerations

13.1 **WASTE TREATMENT METHODS:** Do not burn, or use a cutting torch on, the empty drum. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

14.1	**UN number**	UN1263
14.2	**UN proper shipping name**	Paint
	Technical name	N/A
14.3	**Transport hazard class(es)**	3
	Subsidiary shipping hazard	N/A
14.4	**Packing group**	III
14.5	**Environmental hazards**	Unknown
14.6	**Special precautions for user**	Unknown
	EmS-No.:	F-E, S-E
14.7	**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code**	Unknown

15. Regulatory Information

15.1 **Safety, health and environmental regulations/legislation for the substance or mixture:**

U.S. Federal Regulations: As follows -

CERCLA - Sara Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Acute Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.

No Sara 313 components exist in this product.

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

U.S. Clean Air Act:

EPA Coating Category:
EPA VOC Content Limit (g/l):
Product VOC Content (g/l)
Thinning Recommendations:
Application Recommendations:

Harmful if swallowed.

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS-No.
TETRAISOPROPYL TITANATE	546-68-9

Pennsylvania Right-To-Know

The following non-hazardous ingredients are present in the product at greater than 3%.

No PA Right-To-Know components exist in this product.

California Proposition 65:

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

No Proposition 65 Carcinogens exist in this product.
Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.

No Proposition 65 Reproductive Toxins exist in this product.

International Regulations: As follows -

*** Canadian DSL:**

No Information

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

16. Other Information

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H360	May damage fertility or the unborn child.
H413	May cause long lasting harmful effects to aquatic life.

Reasons for revision

No Information

No Information

Safety Data Sheet
prepared to UN GHS Revision 3

1. Identification of the Substance/Mixture and the Company/Undertaking

1.1 Product Identifier 0249A1NL

Product Name: CARBOZINC 11 HS BASE

Revision Date: 10/07/2015

Supercedes Date: 05/30/2015

1.2 Relevant identified uses of the substance or mixture and uses advised against Component of multicomponent industrial coatings - Industrial use.

1.3 Details of the supplier of the safety data sheet

Manufacturer:
Carboline Company
2150 Schuetz Road
St. Louis, MO USA 63146

Regulatory / Technical Information:
Contact Carboline Technical Services at
1-800-848-4645

Datasheet Produced by: Burst, Chris - ehs@stoncor.com

1.4 Emergency telephone number:
CHEMTREC 1-800-424-9300 (Inside US)
CHEMTREC +1 703 5273887 (Outside US)
HEALTH - Pittsburgh Poison Control 1-412-681-6669

2. Hazard Identification

2.1 Classification of the substance or mixture

Eye Irritation, category 2
Flammable Liquid, category 2
STOT, single exposure, category 3, RTI
Skin Irritation, category 2

2.2 Label elements

Symbol(s) of Product

Signal Word

Danger

Named Chemicals on Label

MICA, ANHYDROUS ALUMINUM SILICATE

GHS HAZARD STATEMENTS

Flammable Liquid, category 2	H225	Highly flammable liquid and vapour.
Skin Irritation, category 2	H315	Causes skin irritation.
Eye Irritation, category 2	H319	Causes serious eye irritation.
STOT, single exposure, category 3, RTI	H335	May cause respiratory irritation.

GHS PRECAUTION PHRASES

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P235	Keep cool.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/ face protection.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P332+313	If skin irritation occurs: Get medical advice/attention.
P403+233	Store in a well-ventilated place. Keep container tightly closed.

2.3 Other hazards

No Information

Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

3. Composition/Information On Ingredients

3.2 Mixtures

Hazardous Ingredients

CAS-No.	Chemical Name	%
64-17-5	ETHYL ALCOHOL	10-25
66402-68-4	ANHYDROUS ALUMINUM SILICATE	10-25
107-98-2	PROPYLENE GLYCOL MONOMETHYL ETHER	2.5-10
12001-26-2	MICA	2.5-10
13463-67-7	TITANIUM DIOXIDE	1.0-2.5
11099-06-2	ETHYL POLYSILICATE	1.0-2.5

CAS-No.	GHS Symbols	GHS Hazard Statements	M-Factors
64-17-5	GHS02	H225	0
66402-68-4	GHS07	H315-319-335	0
107-98-2	GHS02-GHS07	H226-336	0

12001-26-2	GHS07	H319-335	0
13463-67-7			0
11099-06-2			0

Additional Information: The text for GHS Hazard Statements shown above (if any) is given in Section 16.

4. First-aid Measures

4.1 Description of First Aid Measures

AFTER INHALATION: Give oxygen or artificial respiration if needed. Remove person to fresh air. If signs/symptoms continue, get medical attention.
AFTER SKIN CONTACT: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If skin irritation persists, call a physician.
AFTER EYE CONTACT: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
AFTER INGESTION: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If swallowed, call a poison control centre or doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed. Irritating to eyes and skin. Risk of serious damage to the lungs (by aspiration). Vapours may cause drowsiness and dizziness.

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.
When symptoms persist or in all cases of doubt seek medical advice.

5. Fire-fighting Measures

5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable liquid. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Vapors may travel to areas away from work site before igniting/flashing back to vapor source. Provide adequate ventilation. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Electrical installations / working materials must comply with the technological safety standards. Wear shoes with conductive soles.

5.2 Special hazards arising from the substance or mixture

No Information

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. Cool containers / tanks with water spray. Flammable.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

For personal protection see section 8. Ensure adequate ventilation. Ensure adequate ventilation. Evacuate personnel to safe areas. Evacuate personnel to safe areas. Remove all sources of ignition. Remove all sources of ignition. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Wear personal protective equipment.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains.

6.3 Methods and material for containment and cleaning up

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal

according to local / national regulations (see section 13).

6.4 Reference to other sections

Please refer to disposal requirements or country specific disposal requirements for this material. See Section 13 for further information.

7. Handling and Storage

7.1 Precautions for safe handling

INSTRUCTIONS FOR SAFE HANDLING : Keep containers dry and tightly closed to avoid moisture absorption and contamination. Prepare the working solution as given on the label(s) and/or the user instructions. Do not breathe vapours or spray mist. Ensure all equipment is electrically grounded before beginning transfer operations. Do not use sparking tools. Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation/personal protection.
PROTECTION AND HYGIENE MEASURES : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: Heat, flames and sparks.
STORAGE CONDITIONS: Keep container closed when not in use. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

7.3 Specific end use(s)

No specific advice for end use available.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits (US)

Name	%	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	OEL Note
ETHYL ALCOHOL	10-25	1000 PPM	1000 PPM	1900 MGM3	N/E	
ANHYDROUS ALUMINUM SILICATE	10-25	10.0 MG/M3	N/E	5.0 MG/M3	N/E	
PROPYLENE GLYCOL MONOMETHYL ETHER	2.5-10	100 PPM	150 PPM	360 MGM3	N/E	
MICA	2.5-10	3 MGM3	N/E	3 MGM3	N/E	
TITANIUM DIOXIDE	1.0-2.5	10 MGM3	N/E	10 MGM3	N/E	
ETHYL POLYSILICATE	1.0-2.5	N/E	N/E	N/E	N/E	

FURTHER INFORMATION: Refer to the regulatory exposure limits for the workforce enforced in each country.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: In order to avoid inhalation of spray-mist and sanding dust, all spraying and sanding must be done wearing adequate respirator. Use only with ventilation to keep levels below exposure guidelines reported in this document. User should test and monitor exposure levels to ensure all personnel are below guidelines. If not sure, or not able to monitor, use State or federally approved supplied air respirator. For silica containing coatings in a liquid state, and/or if no exposure limits are established above, air-supplied respirators are generally not required.

EYE PROTECTION: Safety glasses with side-shields.

HAND PROTECTION: Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Impervious gloves. Request information on glove permeation properties from the glove supplier.

OTHER PROTECTIVE EQUIPMENT: Ensure that eyewash stations and safety showers are close to the workstation location. Lightweight protective clothing

ENGINEERING CONTROLS: Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined

areas.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Viscous Green, Red, Or Grey
Physical State	Liquid
Odor	Solvent
Odor threshold	N/D
pH	N/D
Melting point / freezing point (°C)	N/D
Boiling point/range (°C)	173 F (78 C) - 248 F (120 C)
Flash Point, (°C)	13
Evaporation rate	Slower Than Ether
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	1.2 - 36.0
Vapour Pressure, mmHg	N/D
Vapour density	Heavier than Air
Relative density	Not determined
Solubility in / Miscibility with water	N/D
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	Not determined
Decomposition temperature (°C)	Not determined
Viscosity	Unknown
Explosive properties	Not determined
Oxidising properties	Not determined

9.2 Other information

VOC Content g/l:	288
Specific Gravity (g/cm3)	1.26

10. Stability and Reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials
Strong oxidizing agents.

10.6 Hazardous decomposition products
Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke.

11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:

Oral LD50: N/D

Inhalation LC50: N/D

Irritation: Unknown

Corrosivity: Unknown

Sensitization: Unknown

Repeated dose toxicity: Unknown

Carcinogenicity: Unknown

Mutagenicity: Unknown

Toxicity for reproduction: Unknown

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
64-17-5	ETHYL ALCOHOL	7060 mg/kg, oral, rat		20000 ppm/10 hrs, rat, inhalation
66402-68-4	ANHYDROUS ALUMINUM SILICATE	Not Available		Not Available
107-98-2	PROPYLENE GLYCOL MONOMETHYL ETHER	4016 mg/kg, oral, rat	13536 mg/kg, dermal, rabbit	10000 ppm/4hrs rat, inhalation
12001-26-2	MICA	Not Available		Not Available
13463-67-7	TITANIUM DIOXIDE	25000 mg/m3, oral (rat)		Not Available
11099-06-2	ETHYL POLYSILICATE	Not Available		Not Available

Additional Information:
Harmful if swallowed. Irritating to eyes and skin. Risk of serious damage to the lungs (by aspiration). Vapours may cause drowsiness and dizziness.

12. Ecological Information

12.1 Toxicity:

EC50 48hr (Daphnia): Unknown

IC50 72hr (Algae): Unknown

LC50 96hr (fish): Unknown

12.2	**Persistence and degradability:**	Unknown
12.3	**Bioaccumulative potential:**	Unknown
12.4	**Mobility in soil:**	Unknown
12.5	**Results of PBT and vPvB assessment:**	The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.
12.6	**Other adverse effects:**	Unknown

CAS-No.	Chemical Name	EC50 48hr	IC50 72hr	LC50 96hr
64-17-5	ETHYL ALCOHOL	2 mg/l (Daphnia Magna)	No information	42 mg/l (fish)
66402-68-4	ANHYDROUS ALUMINUM SILICATE	No information	No information	No information
107-98-2	PROPYLENE GLYCOL MONOMETHYL ETHER	23300 mg/l (Water flea)	No information	20800 mg/l (Fish)
12001-26-2	MICA	No information	No information	No information
13463-67-7	TITANIUM DIOXIDE	No information	No information	No information
11099-06-2	ETHYL POLYSILICATE	No information	No information	No information

13. Disposal Considerations

13.1 **WASTE TREATMENT METHODS:** Do not burn, or use a cutting torch on, the empty drum. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

14.1	**UN number**	UN1263
14.2	**UN proper shipping name**	Paint
	Technical name	N/A
14.3	**Transport hazard class(es)**	3
	Subsidiary shipping hazard	N/A
14.4	**Packing group**	II
14.5	**Environmental hazards**	Unknown
14.6	**Special precautions for user**	Unknown
	EmS-No.:	F-E, S-E
14.7	**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code**	Unknown

15. Regulatory Information

15.1 **Safety, health and environmental regulations/legislation for the substance or mixture:**

U.S. Federal Regulations: As follows -

CERCLA - Sara Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
No Sara 313 components exist in this product.	

Toxic Substances Control Act:

All components of this product are either listed on the TSCA Inventory or are exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS-No.
No NJ Right-To-Know components exist in this product.	

Pennsylvania Right-To-Know

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS-No.
IRON OXIDE	1332-37-2

California Proposition 65:

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

Chemical Name	CAS-No.
TITANIUM DIOXIDE	13463-67-7
MICROCRYSTALLINE SILICA	14808-60-7
METHYL ISOBUTYL KETONE	108-10-1

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.

Chemical Name	CAS-No.
METHYL ALCOHOL	67-56-1
METHYL ISOBUTYL KETONE	108-10-1

International Regulations: As follows -

* Canadian DSL:

No Information

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

16. Other Information

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H315	Causes skin irritation.

H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

Reasons for revision

No Information

No Information

Safety Data Sheet
prepared to UN GHS Revision 3

1. Identification of the Substance/Mixture and the Company/Undertaking

1.1 Product Identifier 0956A1NL

Product Name: CARBOGUARD 992 PART A

Revision Date: 05/30/2015

Supercedes Date: 29/05/2015

1.2 Relevant identified uses of the substance or mixture and uses advised against No Information

1.3 Details of the supplier of the safety data sheet

Manufacturer:
Carboline Company
2150 Schuetz Road
St. Louis, MO USA 63146

Regulatory / Technical Information:
Contact Carboline Technical Services at
1-800-848-4645

Datasheet Produced by: Schlereth, Ken - ehs@stoncor.com

1.4 Emergency telephone number:
CHEMTREC 1-800-424-9300 (Inside US)
CHEMTREC +1 703 5273887 (Outside US)
HEALTH - Pittsburgh Poison Control 1-412-681-6669

2. Hazard Identification

2.1 Classification of the substance or mixture

Hazardous to the aquatic environment, Chronic, category 2
Eye Irritation, category 2
Skin Irritation, category 2
Skin Sensitizer, category 1

2.2 Label elements

Symbol(s) of Product

Signal Word

Warning

Named Chemicals on Label

EPOXY RESIN, EPOXY PHENOL NOVOLAC RESIN

GHS HAZARD STATEMENTS

Skin Irritation, category 2	H315	Causes skin irritation.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
Eye Irritation, category 2	H319	Causes serious eye irritation.
Hazardous to the aquatic environment, Chronic, category 2	H411	Toxic to aquatic life with long lasting effects.

GHS PRECAUTION PHRASES

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/ face protection.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P332+313	If skin irritation occurs: Get medical advice/attention.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.
P391	Collect spillage.

2.3 Other hazards

Not applicable

Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

3. Composition/Information On Ingredients

3.2 Mixtures

Hazardous Ingredients

CAS-No.	Chemical Name	%
28064-14-4	EPOXY PHENOL NOVOLAC RESIN	25-50
9003-36-5	EPOXY RESIN	25-50
1241-94-7	DIPHYNL ESTER	2.5-10
67762-90-7	HYDROPHOBIC SILICA	1.0-2.5

CAS-No.	GHS Symbols	GHS Hazard Statements	M-Factors
28064-14-4	GHS07-GHS09	H315-317-319-411	0
9003-36-5	GHS07-GHS09	H315-317-411	0
1241-94-7	GHS09	H410	0

Additional Information: The text for GHS Hazard Statements shown above (if any) is given in Section 16.

4. First-aid Measures

4.1 Description of First Aid Measures

AFTER INHALATION: Give oxygen or artificial respiration if needed. Remove person to fresh air. If signs/symptoms continue, get medical attention.
AFTER SKIN CONTACT: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If skin irritation persists, call a physician.
AFTER EYE CONTACT: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
AFTER INGESTION: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If swallowed, call a poison control centre or doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Irritating to eyes and skin. May be harmful if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

5. Fire-fighting Measures

5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Vapors may spread long distances and ignite.

5.2 Special hazards arising from the substance or mixture

No Information

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. Evacuate personnel to safe areas. Use NIOSH approved respiratory protection. Use water spray to cool unopened containers.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Ensure adequate ventilation. Evacuate personnel to safe areas. Remove all sources of ignition.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains.

6.3 Methods and material for containment and cleaning up

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

Please refer to disposal requirements or country specific disposal requirements for this material. See Section 13 for further information.

7. Handling and Storage

7.1 Precautions for safe handling

INSTRUCTIONS FOR SAFE HANDLING : Keep containers dry and tightly closed to avoid moisture absorption and contamination. Prepare the working solution as given on the label(s) and/or the user instructions. Ensure all equipment is

electrically grounded before beginning transfer operations. Do not use sparking tools. Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation/personal protection. Avoid breathing vapors, mist or gas.

PROTECTION AND HYGIENE MEASURES : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: Heat, flames and sparks.

STORAGE CONDITIONS: Keep container closed when not in use. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

7.3 Specific end use(s)

No specific advice for end use available.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits (US)

Name	%	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	OEL Note
EPOXY PHENOL NOVOLAC RESIN	25-50	N/E	N/E	N/E	N/E	
EPOXY RESIN	25-50	N/E	N/E	N/E	N/E	
DIPHYNL ESTER	2.5-10	N/E	N/E	N/E	N/E	
HYDROPHOBIC SILICA	1.0-2.5	10 MG/M3, INHALABLE	N/E	6 MG/M3	N/E	

FURTHER INFORMATION: Refer to the regulatory exposure limits for the workforce enforced in each country.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: In order to avoid inhalation of spray-mist and sanding dust, all spraying and sanding must be done wearing adequate respirator. Use only with ventilation to keep levels below exposure guidelines reported in this document. User should test and monitor exposure levels to ensure all personnel are below guidelines. If not sure, or not able to monitor, use State or federally approved supplied air respirator. For silica containing coatings in a liquid state, and/or if no exposure limits are established above, air-supplied respirators are generally not required.

EYE PROTECTION: Safety glasses with side-shields.

HAND PROTECTION: Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Impervious glovesRequest information on glove permeation properties from the glove supplier.

OTHER PROTECTIVE EQUIPMENT: Ensure that eyewash stations and safety showers are close to the workstation location. Lightweight protective clothing

ENGINEERING CONTROLS: Avoid contact with skin, eyes and clothing. Use only in an area equipped with explosion proof exhaust ventilation. Ensure adequate ventilation, especially in confined areas.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Viscous Liquid
Physical State	Liquid
Odor	Slight Phenolic
Odor threshold	
pH	N/D

Melting point / freezing point (°C)	N/D
Boiling point/range (°C)	N/A - N/A
Flash Point, (°C)	97
Evaporation rate	
Flammability (solid, gas)	
Upper/lower flammability or explosive limits	Not determined
Vapour Pressure, mmHg	N/D
Vapour density	
Relative density	
Solubility in / Miscibility with water	N/D
Partition coefficient: n-octanol/water	
Auto-ignition temperature (°C)	
Decomposition temperature (°C)	
Viscosity	Unknown
Explosive properties	
Oxidising properties	

9.2 Other information

VOC Content g/l:	6
Specific Gravity (g/cm3)	1.19

10. Stability and Reactivity

10.1 Reactivity
No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions
Hazardous polymerisation does not occur.

10.4 Conditions to avoid
Heat, flames and sparks.

10.5 Incompatible materials
Strong oxidizing agents.

10.6 Hazardous decomposition products
Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke.

11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:

Oral LD50: N/D

Inhalation LC50: N/D

Irritation: Unknown

Corrosivity: Unknown

Sensitization: Unknown

Repeated dose toxicity: Unknown

Carcinogenicity: Unknown

Mutagenicity: Unknown

Toxicity for reproduction: Unknown

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
28064-14-4	EPOXY PHENOL NOVOLAC RESIN	>5000 mg/kg. oral, rat	>2000 mg/kg, rabbit	Not Available
9003-36-5	EPOXY RESIN	>5000 mg/kg, oral, rat		Not Available
67762-90-7	HYDROPHOBIC SILICA	6350 mg/kg, oral, rat		Not Available

Additional Information:

Irritating to eyes and skin. May be harmful if swallowed.

12. Ecological Information

12.1 Toxicity:

EC50 48hr (Daphnia): Unknown

IC50 72hr (Algae): Unknown

LC50 96hr (fish): Unknown

12.2 Persistence and degradability: Unknown

12.3 Bioaccumulative potential: Unknown

12.4 Mobility in soil: Unknown

12.5 Results of PBT and vPvB assessment: The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

12.6 Other adverse effects: Unknown

CAS-No.	Chemical Name	EC50 48hr	IC50 72hr	LC50 96hr
28064-14-4	EPOXY PHENOL NOVOLAC RESIN	No information	No information	No information
9003-36-5	EPOXY RESIN	No information	No information	No information
1241-94-7	DIPHYNL ESTER	No information	No information	No information
67762-90-7	HYDROPHOBIC SILICA	No information	No information	No information

13. Disposal Considerations

13.1 **WASTE TREATMENT METHODS:** Do not burn, or use a cutting torch on, the empty drum. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

14.1	**UN number**	None
14.2	**UN proper shipping name**	Not Regulated
	Technical name	N/A
14.3	**Transport hazard class(es)**	None
	Subsidiary shipping hazard	N/A
14.4	**Packing group**	N/A
14.5	**Environmental hazards**	Marine Pollutant: Yes
14.6	**Special precautions for user**	Unknown
	EmS-No.:	N/A
14.7	**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code**	Unknown

15. Regulatory Information

15.1 **Safety, health and environmental regulations/legislation for the substance or mixture:**

U.S. Federal Regulations: As follows -

CERCLA - Sara Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

None Known

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
No Sara 313 components exist in this product.	

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

Chemical Name	CAS-No.

No TSCA 12(b) components exist in this product.

U.S. Clean Air Act:

EPA Coating Category:
EPA VOC Content Limit (g/l):
Product VOC Content (g/l)
Thinning Recommendations:
Application Recommendations:

May be harmful if swallowed.

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS-No.
ADDITIVE	TRADE SECRET

Pennsylvania Right-To-Know

The following non-hazardous ingredients are present in the product at greater than 3%.

No PA Right-To-Know components exist in this product.

California Proposition 65:

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

Chemical Name	CAS-No.
ETHYL BENZENE	100-41-4
CUMENE	98-82-8
BENZENE	71-43-2

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.

Chemical Name	CAS-No.
TOLUENE	108-88-3
BENZENE	71-43-2

International Regulations: As follows -

*** Canadian DSL:**

No Information

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

16. Other Information

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Reasons for revision

No Information

No Information

Safety Data Sheet
prepared to UN GHS Revision 3

1. Identification of the Substance/Mixture and the Company/Undertaking

1.1 Product Identifier 0956B1NL

Product Name: CARBOGUARD 992 PART B

Revision Date: 05/30/2015

Supercedes Date: 29/05/2015

1.2 Relevant identified uses of the substance or mixture and uses advised against No Information

1.3 Details of the supplier of the safety data sheet

Manufacturer:
Carboline Company
2150 Schuetz Road
St. Louis, MO USA 63146

Regulatory / Technical Information:
Contact Carboline Technical Services at
1-800-848-4645

Datasheet Produced by: Schlereth, Ken - ehs@stoncor.com

1.4 Emergency telephone number:
CHEMTREC 1-800-424-9300 (Inside US)
CHEMTREC +1 703 5273887 (Outside US)
HEALTH - Pittsburgh Poison Control 1-412-681-6669

2. Hazard Identification

2.1 Classification of the substance or mixture

Acute Toxicity, Oral, category 4
Acute Toxicity, Inhalation, category 4
Carcinogenicity, category 1A
Respiratory Sensitizer, category 1
STOT, single exposure, category 1
Skin Corrosion, category 1
Skin Sensitizer, category 1

2.2 Label elements

Symbol(s) of Product

Signal Word

Danger

Named Chemicals on Label

BENZYL ALCOHOL, ISOPHORONEDIAMINE, MICROCRYSTALLINE SILICA, AMINE ADDUCT

GHS HAZARD STATEMENTS

Acute Toxicity, Oral, category 4	H302	Harmful if swallowed.
Skin Corrosion, category 1	H314-1	Causes severe skin burns and eye damage.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
Respiratory Sensitizer, category 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Carcinogenicity, category 1A	H350-1A	May cause cancer.
STOT, single exposure, category 1	H370	Causes damage to organs.

GHS PRECAUTION PHRASES

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P270	Do no eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/ face protection.
P284	Wear respiratory protection.
P285	In case of inadequate ventilation wear respiratory protection.
P301+310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P307+311	IF exposed, call a POISON CENTER or doctor/physician.
P308+313	IF exposed or concerned: Get medical advice/attention
P314	Get medical advice/attention if you feel unwell.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.
P341	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342	If experiencing respiratory symptoms:

2.3 Other hazards

Not applicable

Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

3. Composition/Information On Ingredients

3.2 Mixtures

Hazardous Ingredients

CAS-No.	Chemical Name	%
14808-60-7	MICROCRYSTALLINE SILICA	50-75
13463-67-7	TITANIUM DIOXIDE	10-25
100-51-6	BENZYL ALCOHOL	10-25
2855-13-2	ISOPHORONEDIAMINE	10-25
TRADE SECRET	AMINE ADDUCT	2.5-10
28553-12-0	DIISONONYL PHTHALATE	0.1-1.0

CAS-No.	GHS Symbols	GHS Hazard Statements	M-Factors
14808-60-7	GHS08	H350-370	0
13463-67-7			0
100-51-6	GHS07	H302-312-319-332	0
2855-13-2	GHS05-GHS07	H302-312-314-317-412	0
TRADE SECRET	GHS05-GHS07-GHS08	H302-318-334-335-336-372	0
28553-12-0			0

Additional Information: The text for GHS Hazard Statements shown above (if any) is given in Section 16.

4. First-aid Measures

4.1 Description of First Aid Measures

AFTER INHALATION: Give oxygen or artificial respiration if needed. Remove person to fresh air. If signs/symptoms continue, get medical attention.
AFTER SKIN CONTACT: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If skin irritation persists, call a physician.
AFTER EYE CONTACT: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
AFTER INGESTION: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If swallowed, call a poison control centre or doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Irritating to eyes and skin. May be harmful if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

5. Fire-fighting Measures

5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Vapors may spread long distances and ignite.

5.2 Special hazards arising from the substance or mixture

No Information

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. Evacuate personnel to safe areas. Use NIOSH approved respiratory protection. Use water spray to cool unopened containers.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Ensure adequate ventilation. Evacuate personnel to safe areas. Remove all sources of ignition.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains.

6.3 Methods and material for containment and cleaning up

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

Please refer to disposal requirements or country specific disposal requirements for this material. See Section 13 for further information.

7. Handling and Storage

7.1 Precautions for safe handling

INSTRUCTIONS FOR SAFE HANDLING : Keep containers dry and tightly closed to avoid moisture absorption and contamination. Prepare the working solution as given on the label(s) and/or the user instructions. Do not breathe vapours or spray mist. Ensure all equipment is electrically grounded before beginning transfer operations. Do not use sparking tools. Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation/personal protection.
PROTECTION AND HYGIENE MEASURES : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: Heat, flames and sparks.
STORAGE CONDITIONS: Keep container closed when not in use. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

7.3 Specific end use(s)

No specific advice for end use available.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits (US)

Name	%	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	OEL Note
MICROCRYSTALLINE SILICA	50-75	0.025 MG/M3 (respirable)	N/E	0.1 MG/M3	N/E	
TITANIUM DIOXIDE	10-25	10 MGM3	N/E	10 MGM3	N/E	
BENZYL ALCOHOL	10-25	N/E	N/E	N/E	N/E	
ISOPHORONEDIAMINE	10-25	N/E	N/E	N/E	N/E	
AMINE ADDUCT	2.5-10	N/E	N/E	N/E	N/E	
DIISONONYL PHTHALATE	0.1-1.0	N/E	N/E	N/E	N/E	

FURTHER INFORMATION: Refer to the regulatory exposure limits for the workforce enforced in each country.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: In order to avoid inhalation of spray-mist and sanding dust, all spraying and sanding must be done wearing adequate respirator. Use only with ventilation to keep levels below exposure guidelines reported in this document. User should test and monitor exposure levels to ensure all personnel are below guidelines. If not sure, or not able to monitor, use State or federally approved supplied air respirator. For silica containing coatings in a liquid state, and/or if no exposure limits are established above, air-supplied respirators are generally not required.

EYE PROTECTION: Safety glasses with side-shields.

HAND PROTECTION: Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Impervious glovesRequest information on glove permeation properties from the glove supplier.

OTHER PROTECTIVE EQUIPMENT: Ensure that eyewash stations and safety showers are close to the workstation location. Lightweight protective clothing

ENGINEERING CONTROLS: Avoid contact with skin, eyes and clothing. Use only in an area equipped with explosion proof exhaust ventilation. Ensure adequate ventilation, especially in confined areas.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Viscous Liquid, Various Colors
Physical State	Liquid
Odor	Amine
Odor threshold	
pH	N/D
Melting point / freezing point (°C)	N/D
Boiling point/range (°C)	300 F (149 C) - 513 F (267 C)
Flash Point, (°C)	97
Evaporation rate	
Flammability (solid, gas)	
Upper/lower flammability or explosive limits	Not determined
Vapour Pressure, mmHg	N/D
Vapour density	
Relative density	
Solubility in / Miscibility with water	N/D
Partition coefficient: n-octanol/water	
Auto-ignition temperature (°C)	
Decomposition temperature (°C)	
Viscosity	Unknown
Explosive properties	
Oxidising properties	

9.2 Other information

VOC Content g/l:	6
Specific Gravity (g/cm3)	app. 1.64

10. Stability and Reactivity

10.1 Reactivity
No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions
Hazardous polymerisation does not occur.

10.4 Conditions to avoid
Heat, flames and sparks.

10.5 Incompatible materials
Strong oxidizing agents.

10.6 Hazardous decomposition products
Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke.

11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:

Oral LD50:	N/D
Inhalation LC50:	N/D
Irritation:	Unknown
Corrosivity:	Unknown
Sensitization:	Unknown
Repeated dose toxicity:	Unknown
Carcinogenicity:	Unknown
Mutagenicity:	Unknown
Toxicity for reproduction:	Unknown

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
14808-60-7	MICROCRYSTALLINE SILICA	Not Available		Not Available
13463-67-7	TITANIUM DIOXIDE	25000 mg/m3, oral (rat)		Not Available

100-51-6	BENZYL ALCOHOL	1230 mg/kg rat, oral	2000 mg/kg, dermal, rabbit	1000 ppm / 8 hrs rat, inhalation
2855-13-2	ISOPHORONEDIAMINE	500 mg/kg oral		Not Available
TRADE SECRET	AMINE ADDUCT	500 mg/kg, oral, rat		Not Available

Additional Information:

Irritating to eyes and skin. May be harmful if swallowed.

12. Ecological Information

12.1 Toxicity:

EC50 48hr (Daphnia): Unknown

IC50 72hr (Algae): Unknown

LC50 96hr (fish): Unknown

12.2 Persistence and degradability: Unknown

12.3 Bioaccumulative potential: Unknown

12.4 Mobility in soil: Unknown

12.5 Results of PBT and vPvB assessment: The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

12.6 Other adverse effects: Unknown

CAS-No.	Chemical Name	EC50 48hr	IC50 72hr	LC50 96hr
14808-60-7	MICROCRYSTALLINE SILICA	No information	No information	No information
13463-67-7	TITANIUM DIOXIDE	No information	No information	No information
100-51-6	BENZYL ALCOHOL	No information	No information	No information
2855-13-2	ISOPHORONEDIAMINE	No information	No information	No information
TRADE SECRET	AMINE ADDUCT	No information	No information	No information
28553-12-0	DIISONONYL PHTHALATE	No information	No information	No information

13. Disposal Considerations

13.1 WASTE TREATMENT METHODS: Do not burn, or use a cutting torch on, the empty drum. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

14.1	UN number	None
14.2	UN proper shipping name	Not Regulated
	Technical name	N/A
14.3	Transport hazard class(es)	None
	Subsidiary shipping hazard	N/A
14.4	Packing group	N/A
14.5	Environmental hazards	Unknown
14.6	Special precautions for user	Unknown
	EmS-No.:	N/A
14.7	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	Unknown

15. Regulatory Information

15.1 **Safety, health and environmental regulations/legislation for the substance or mixture:**

U.S. Federal Regulations: As follows -

CERCLA - Sara Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

No Sara 313 components exist in this product.

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

U.S. Clean Air Act:

EPA Coating Category:
EPA VOC Content Limit (g/l):
Product VOC Content (g/l)
Thinning Recommendations:
Application Recommendations:

May be harmful if swallowed.

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS-No.
No NJ Right-To-Know components exist in this product.	

Pennsylvania Right-To-Know

The following non-hazardous ingredients are present in the product at greater than 3%.

No PA Right-To-Know components exist in this product.

California Proposition 65:

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

Chemical Name	CAS-No.
MICROCRYSTALLINE SILICA	14808-60-7
TITANIUM DIOXIDE	13463-67-7
DIISONONYL PHTHALATE	28553-12-0
CARBON BLACK	1333-86-4

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.

No Proposition 65 Reproductive Toxins exist in this product.

International Regulations: As follows -

* Canadian DSL:

No Information

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

16. Other Information

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H350	May cause cancer.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Reasons for revision

No Information

No Information

Safety Data Sheet
HEMPEL'S CURING AGENT 97580

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2015/830 - Europe

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name :	HEMPEL'S CURING AGENT 97580
Product identity :	9758000000
Product type :	Curing agent

1.2 Relevant identified uses of the substance or mixture and uses advised against

Field of application :	used only as part of two- or multi component products.
Ready-for-use mixture :	(see base component)
Identified uses :	Industrial applications, Used by spraying.

1.3 Details of the supplier of the safety data sheet

Company details :	HEMPEL A/S Lundtoftegårdsvej 91 DK-2800 Kgs. Lyngby Denmark Tel.: + 45 45 93 38 00 hempel@hempel.com
Date of issue :	12 February 2016
Date of previous issue :	17 September 2015.

1.4 Emergency telephone number

Emergency telephone number (with hours of operation)

+45 45 93 38 00 (08.00 - 17.00)
See section 4 First aid measures.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3
Acute Tox. 4, H332	ACUTE TOXICITY (inhalation) - Category 4
Skin Corr. 1B, H314	SKIN CORROSION/IRRITATION - Category 1B
Eye Dam. 1, H318	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Skin Sens. 1, H317	SKIN SENSITIZATION - Category 1
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :

Signal word :	Danger
Hazard statements :	H226 - Flammable liquid and vapor. H332 - Harmful if inhaled. H314 - Causes severe skin burns and eye damage. H317 - May cause an allergic skin reaction. H335 - May cause respiratory irritation.

Precautionary statements :

Prevention :	Do not breathe gas, vapor or spray. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Response :	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Rinse skin with water or shower. Take off immediately all contaminated clothing. Immediately call a POISON CENTER or doctor.
Storage :	Keep cool.

SECTION 2: Hazards identification

Hazardous ingredients : xylene
N,N-diethyl-1,3-diaminopropane
iso-butanol
ethylbenzene
m-Xylylene-diamine

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]		Type
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥10 - ≤24	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315	C	[1] [2]
N,N-diethyl-1,3-diaminopropane	REACH #: 01-2119965402-39 EC: 203-236-4 CAS: 104-78-9 Index: 612-062-00-1	≥10 - ≤15	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 3, H311 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335	-	[1]
benzyl alcohol	REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5	≥10 - ≤15	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319	-	[1]
iso-butanol	REACH #: 01-2119484609-23 EC: 201-148-0 CAS: 78-83-1 Index: 603-108-00-1	≥5 - ≤10	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	-	[1]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≥5 - ≤6.5	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304	-	[1] [2]
m-Xylylene-diamine	REACH #: 01-2119480150-50 EC: 216-032-5 CAS: 1477-55-0	≥3 - ≤5	Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412 EUH071 See Section 16 for the full text of the H statements declared above.	-	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit, see section 8.
[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
[5] Substance of equivalent concern

SECTION 4: First aid measures

4.1 Description of 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. If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 112 and give immediate treatment (first aid).
Eye contact :	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek immediate medical attention.
Inhalation :	Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Give nothing by mouth. If unconscious, place in recovery position and get medical attention immediately.
Skin contact :	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners. In case of burns flush with water until the pain ceases. While flushing remove clothing from the affected area unless it is burnt into the skin. If hospital treatment is necessary flushing must continue during transfer and until the hospital staff takes over the treatment.
Ingestion :	If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so that vomit will not re-enter the mouth and throat.
Protection of first-aiders :	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact :	Causes serious eye damage.
Inhalation :	Harmful if inhaled. May cause respiratory irritation.
Skin contact :	Causes severe burns. May cause an allergic skin reaction.
Ingestion :	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact :	Adverse symptoms may include the following: pain watering redness
Inhalation :	Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact :	Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion :	Adverse symptoms may include the following: stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician :	If gasses have been inhaled, from the decomposition of the product, symptoms may be delayed. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments :	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media :	Recommended: alcohol resistant foam, CO_2, powders, water spray. Not to be used: waterjet.

5.2 Special hazards arising from the substance or mixture

SECTION 5: Firefighting measures

5.3 Advice for firefighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid all direct contact with the spilled material. Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8. No action shall be taken involving any personal risk or without suitable training. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should be used only in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. No sparking tools should be used.
Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

See separate Product Data Sheet for recommendations or industrial sector specific solutions.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Exposure limit values
xylene	**EU OEL (Europe, 12/2009). Absorbed through skin.** STEL: 442 mg/m³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 221 mg/m³ 8 hours. TWA: 50 ppm 8 hours.
ethylbenzene	**EU OEL (Europe, 12/2009). Absorbed through skin.** STEL: 884 mg/m³ 15 minutes. STEL: 200 ppm 15 minutes. TWA: 442 mg/m³ 8 hours. TWA: 100 ppm 8 hours.
m-Xylylene-diamine	**EU OEL (Europe, 2/2010). Absorbed through skin.** (ACGIH) C: 0.1 mg/m³

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Derived effect levels

No DNELs/DMELs available.

Predicted effect concentrations

No PNECs available.

8.2 Exposure controls

Appropriate engineering controls

Arrange sufficient ventilation by local exhaust ventilation and good general ventilation to keep the airborne concentrations of vapors or dust lowest possible and below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Individual protection measures

General : Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. Safety eyewear should be used when there is a likelihood of exposure.

Hygiene measures : Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection : Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. The quality of the chemical-resistant protective gloves must be chosen as a function of the specific workplace concentrations and quantity of hazardous substances.

Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type. Below listed glove(s) should be regarded as generic advice:

Recommended: Silver Shield / 4H gloves, Viton®
May be used: polyvinyl alcohol (PVA), nitrile rubber, neoprene rubber, butyl rubber
Short term exposure: natural rubber (latex), polyvinyl chloride (PVC)

SECTION 8: Exposure controls/personal protection

Body protection :	Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product. Wear suitable protective clothing. Always wear protective clothing when spraying. Chemical-resistant apron.
Respiratory protection :	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If working areas have insufficient ventilation: When the product is applied by means that will not generate an aerosol such as, brush or roller wear half or totally covering mask equipped with gas filter of type A, when grinding use particle filter of type P. When the product is applied by spraying and for continuous or prolonged work always wear an air-fed respirator e.g. hood with supply of fresh or compressed air or a full face, powered air purifying filter. Be sure to use an approved/certified respirator or equivalent.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state :	Liquid.
Odor :	Solvent-like
pH :	Testing not relevant or not possible due to nature of the product.
Melting point/freezing point :	Testing not relevant or not possible due to nature of the product.
Boiling point/boiling range :	Testing not relevant or not possible due to nature of the product.
Flash point :	Closed cup: 25°C (77°F)
Evaporation rate :	Testing not relevant or not possible due to nature of the product.
Flammability :	Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Lower and upper explosive (flammable) limits :	0.8 - 13 vol %
Vapor pressure :	Testing not relevant or not possible due to nature of the product.
Vapor density :	Testing not relevant or not possible due to nature of the product.
Relative density :	0.942 g/cm³
Solubility(ies) :	Partially soluble in the following materials: cold water and hot water.
Partition coefficient (LogKow) :	Testing not relevant or not possible due to nature of the product.
Auto-ignition temperature :	Lowest known value: 415°C (779°F) (iso-butanol).
Decomposition temperature :	Testing not relevant or not possible due to nature of the product.
Viscosity :	Aspiration hazard (H304) Not classified. Testing not relevant due to nature of the product.
Explosive properties :	Highly explosive in the presence of the following materials or conditions: heat. Explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and oxidizing materials. Slightly explosive in the presence of the following materials or conditions: reducing materials.
Oxidizing properties :	Testing not relevant or not possible due to nature of the product.

9.2 Other information

Solvent(s) % by weight :	Weighted average: 50 %
Water % by weight :	Weighted average: 0 %
VOC content :	525.6 g/l
TOC Content :	Weighted average: 319 g/l
Solvent Gas :	Weighted average: 0.141 m³/l

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials

Highly reactive or incompatible with the following materials: oxidizing materials.
Reactive or incompatible with the following materials: reducing materials.

10.6 Hazardous decomposition products

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed:

Decomposition products may include the following materials: carbon oxides nitrogen oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Exposure to component solvent vapor concentrations may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Accidental swallowing may cause stomach pain. Chemical lung inflammation may occur if the product is taken into the lungs via vomiting.
Inhalation of a corrosive substance may result in health effects such as stinging, coughing and in extreme cases, dyspnoea or loss of consciousness with a risk of lung damage, possibly lung oedema. Cauterization of skin and mucous membrane. If splashed in the eyes, the liquid may cause ireversible damage. Accidental swallowing may cause stinging and cauterization to mouth, oesophagus and stomach. Symptoms and signs include bloody vomiting, chock and loss of consciousness.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	6350 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
N,N-diethyl-1,3-diaminopropane	LD50 Dermal	Rabbit	525 mg/kg	-
	LD50 Oral	Rat	830 mg/kg	-
benzyl alcohol	LC50 Inhalation Dusts and mists	Rat	>4178 mg/m³	4 hours
	LD50 Oral	Rat	1620 mg/kg	-
iso-butanol	LC50 Inhalation Vapor	Rat	19200 mg/m³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-
ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
m-Xylylene-diamine	LC50 Inhalation Dusts and mists	Rat	1.34 mg/l	4 hours
	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	930 mg/kg	-

Acute toxicity estimates

Route	ATE value
Oral	3338.1 mg/kg
Dermal	2023.1 mg/kg
Inhalation (gases)	17976.3 ppm
Inhalation (vapors)	25.45 mg/l

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure
xylene	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams
N,N-diethyl-1,3-diaminopropane	Skin - Severe irritant	Rabbit	-	-
	Eyes - Severe irritant	Rabbit	-	-
benzyl alcohol	Eyes - Irritant	Rabbit	-	-
	Skin - Mild irritant	Rabbit	-	-
ethylbenzene	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams
	Respiratory - Mild irritant	Rabbit	-	-
	Eyes - Mild irritant	Rabbit	-	-
m-Xylylene-diamine	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms
	Skin - Severe irritant	Rabbit	-	24 hours 750 Micrograms
	Respiratory - Severe irritant	Rabbit	-	-

Sensitizer

Product/ingredient name	Route of exposure	Species	Result
N,N-diethyl-1,3-diaminopropane	skin	Guinea pig	Sensitizing

Mutagenic effects

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Teratogenic effects

No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
N,N-diethyl-1,3-diaminopropane	Category 3	Not applicable.	Respiratory tract irritation
iso-butanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	Not determined	hearing organs

Aspiration hazard

Product/ingredient name	Result
ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

Sensitization : Contains N,N-diethyl-1,3-diaminopropane, m-Xylylene-diamine. May produce an allergic reaction.

Other information : No additional known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Do not allow to enter drains or watercourses.

SECTION 12: Ecological information

Product/ingredient name	Result	Species	Exposure
benzyl alcohol	Acute EC50 230 mg/l	Daphnia	48 hours
	Acute IC50 770 mg/l	Algae	72 hours
	Acute LC50 460 mg/l	Fish	96 hours
iso-butanol	Chronic NOEC 4000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
ethylbenzene	Chronic NOEC <1000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
m-Xylylene-diamine	Acute EC50 12 mg/l	Algae	72 hours
	Acute EC50 15.2 mg/l	Daphnia - Daphnia	48 hours
	Acute LC50 75 mg/l	Fish - Leuciscus idus	96 hours
	Acute NOEC 4.7 mg/l	Daphnia	21 days

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
xylene	-	>60 % - Readily - 28 days	-	-
N,N-diethyl-1,3-diaminopropane	OECD 301A Ready Biodegradability - DOC Die-Away Test	90 % - Readily - 28 days	-	-
	OECD 301A 301A Ready Biodegradability - DOC Die-Away Test	0 % - Not readily - 28 days	-	-
benzyl alcohol	OECD 301C 301C Ready Biodegradability - Modified MITI Test (I)	92 - 96 % - Readily - 14 days	-	-
ethylbenzene	-	>70 % - Readily - 28 days	-	-
m-Xylylene-diamine	OECD 301B 301B Ready Biodegradability - CO_2 Evolution Test	49 % - Inherent - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene	-	-	Readily
N,N-diethyl-1,3-diaminopropane	-	-	Not readily
benzyl alcohol	-	-	Readily
ethylbenzene	-	-	Readily
m-Xylylene-diamine	-	-	Inherent

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
xylene	3.12	8.1 - 25.9	low
N,N-diethyl-1,3-diaminopropane	0.3	6.3	low
benzyl alcohol	1.05	1.37	low
iso-butanol	1	-	low
ethylbenzene	3.6	-	low
m-Xylylene-diamine	0.18	2.69	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : No known data avaliable in our database.

Mobility : No known data avaliable in our database.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Residues of the product is listed as hazardous waste. Dispose of according to all state and local applicable regulations. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Spillage, remains, discarded clothes and similar should be discarded in a fireproof container.

European waste catalogue no. (EWC) is given below.

European waste catalogue (EWC) : 08 01 11*

Packaging

The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transport information

Transport may take place according to national regulation or ADR for transport by road, RID for transport by train, IMDG for transport by sea, IATA for transport by air.

	14.1 UN no.	14.2 Proper shipping name	14.3 Transport hazard class(es)	14.4 PG*	14.5 Env*	Additional information
ADR/RID Class	UN3469	PAINT, FLAMMABLE, CORROSIVE	3 8	III	No.	**Tunnel code** (D/E)
IMDG Class	UN3469	PAINT, FLAMMABLE, CORROSIVE	3 8	III	No.	**Emergency schedules (EmS)** F-E, S-C
IATA Class	UN3469	PAINT, FLAMMABLE, CORROSIVE	3 8	III	No.	-

PG* : Packing group
Env.* : Environmental hazards

14.6 Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH) Annex XIV - List of substances subject to authorization - Substances of very high concern

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

Other EU regulations

Seveso category This product is controlled under the Seveso III Directive.

Seveso category
P5c: Flammable liquids 2 and 3 not falling under P5a or P5b C6: Flammable (R10)

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

Safety Data Sheet
HEMPADUR 15509

HEMPEL

Blue 3-year

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2015/830 - Europe

SECTION 1: Identification of the substance/mixture and of the company/undertaking

White + Red Color

1.1 Product identifier

Product name :	HEMPADUR 15509
Product identity :	1550911150
Product type :	epoxy phenolic paint (base for multi-component product)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Field of application :	metal industry, ships and shipyards.
Ready-for-use mixture :	15500 = 15509 8.9 vol. / 97580 1.1 vol.
Identified uses :	Industrial applications, Used by spraying.

1.3 Details of the supplier of the safety data sheet

Company details : HEMPEL A/S
Lundtoftegårdsvej 91
DK-2800 Kgs. Lyngby
Denmark
Tel.: + 45 45 93 38 00
hempel@hempel.com

Date of issue : 10 February 2016

Date of previous issue : 8 October 2014.

1.4 Emergency telephone number

Emergency telephone number (with hours of operation)

+45 45 93 38 00 (08.00 - 17.00)
See section 4 First aid measures.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
Eye Dam. 1, H318	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Skin Sens. 1, H317	SKIN SENSITIZATION - Category 1
Aquatic Chronic 3, H412	AQUATIC HAZARD (LONG-TERM) - Category 3

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :

Signal word :	Danger
Hazard statements :	H226 - Flammable liquid and vapor. H318 - Causes serious eye damage. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements :	
Prevention :	Avoid breathing vapors, spray or mists. Wear protective gloves/protective clothing/eye protection/face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Response :	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
Storage :	Keep cool.
Hazardous ingredients :	Bisphenol F-(epichlorhydrin) epoxy resin MW =< 700 iso-butanol octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine
Supplemental label elements :	Contains epoxy constituents. May produce an allergic reaction.

SECTION 2: Hazards identification

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]		Type
bisphenol F-(epichlorhydrin) epoxy resin MW =< 700	REACH #: 01-2119454392-40 EC: 500-006-8 CAS: 28064-14-4	≥10 - <25	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	-	[1]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥10 - ≤20	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315	C	[1] [2]
iso-butanol	REACH #: 01-2119484609-23 EC: 201-148-0 CAS: 78-83-1 Index: 603-108-00-1	≥3 - ≤5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	-	[1]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≥1 - ≤3	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304 See Section 16 for the full text of the H statements declared above.	-	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit, see section 8.
[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
[5] Substance of equivalent concern

SECTION 4: First aid measures

4.1 Description of 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.

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 112 and give immediate treatment (first aid).

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek immediate medical attention.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Give nothing by mouth. If unconscious, place in recovery position and get medical attention immediately.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so that vomit will not re-enter the mouth and throat.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

SECTION 4: First aid measures

Eye contact :	Causes serious eye damage.
Inhalation :	No known significant effects or critical hazards.
Skin contact :	Causes skin irritation. May cause an allergic skin reaction.
Ingestion :	No known significant effects or critical hazards.
Over-exposure signs/symptoms	
Eye contact :	Adverse symptoms may include the following: pain watering redness
Inhalation :	No specific data.
Skin contact :	Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion :	Adverse symptoms may include the following: stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician :	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments :	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media :	Recommended: alcohol resistant foam, CO_2, powders, water spray. Not to be used: waterjet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture :	Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous combustion products :	Decomposition products may include the following materials: carbon oxides sulfur oxides metal oxide/ oxides

5.3 Advice for firefighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid all direct contact with the spilled material. Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8. No action shall be taken involving any personal risk or without suitable training. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and materials for containment and cleaning up

SECTION 6: Accidental release measures

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should be used only in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. No sparking tools should be used. Contains epoxy constituents. Avoid all possible skin contact with epoxy and amine containing products, they may cause allergic reactions.
Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

See separate Product Data Sheet for recommendations or industrial sector specific solutions.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Product/ingredient name	Exposure limit values
xylene	**EU OEL (Europe, 12/2009). Absorbed through skin.** STEL: 442 mg/m³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 221 mg/m³ 8 hours. TWA: 50 ppm 8 hours.
ethylbenzene	**EU OEL (Europe, 12/2009). Absorbed through skin.** STEL: 884 mg/m³ 15 minutes. STEL: 200 ppm 15 minutes. TWA: 442 mg/m³ 8 hours. TWA: 100 ppm 8 hours.

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Derived effect levels

No DNELs/DMELs available.

Predicted effect concentrations

No PNECs available.

8.2 Exposure controls

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls

Arrange sufficient ventilation by local exhaust ventilation and good general ventilation to keep the airborne concentrations of vapors or dust lowest possible and below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Individual protection measures

General : Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. Safety eyewear should be used when there is a likelihood of exposure.

Hygiene measures : Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection : Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. The quality of the chemical-resistant protective gloves must be chosen as a function of the specific workplace concentrations and quantity of hazardous substances.

Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type. Below listed glove(s) should be regarded as generic advice:

Recommended: Silver Shield / 4H gloves, Viton®
May be used: polyvinyl alcohol (PVA), nitrile rubber, butyl rubber
Short term exposure: neoprene rubber, natural rubber (latex), polyvinyl chloride (PVC)

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product.
Wear suitable protective clothing. Always wear protective clothing when spraying.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If working areas have insufficient ventilation: When the product is applied by means that will not generate an aerosol such as, brush or roller wear half or totally covering mask equipped with gas filter of type A, when grinding use particle filter of type P. Be sure to use an approved/certified respirator or equivalent.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state :	Liquid.
Color :	Light grey
Odor :	Solvent-like
pH :	Testing not relevant or not possible due to nature of the product.
Melting point/freezing point :	1580°C This is based on data for the following ingredient: barium sulphate
Boiling point/boiling range :	Testing not relevant or not possible due to nature of the product.
Flash point :	Closed cup: 26°C (78.8°F)
Evaporation rate :	Testing not relevant or not possible due to nature of the product.
Flammability :	Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Lower and upper explosive (flammable) limits :	0.8 - 10.9 vol %

SECTION 9: Physical and chemical properties

Relative density :	1.752 g/cm³
Solubility(ies) :	Very slightly soluble in the following materials: cold water and hot water.
Partition coefficient (LogKow) :	Testing not relevant or not possible due to nature of the product.
Auto-ignition temperature :	Lowest known value: 415°C (779°F) (iso-butanol).
Decomposition temperature :	Testing not relevant or not possible due to nature of the product.
Viscosity :	Aspiration hazard (H304) Not classified. Testing not relevant due to nature of the product.
Explosive properties :	Highly explosive in the presence of the following materials or conditions: heat. Explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and oxidizing materials. Slightly explosive in the presence of the following materials or conditions: reducing materials.
Oxidizing properties :	Testing not relevant or not possible due to nature of the product.

9.2 Other information

Solvent(s) % by weight :	Weighted average: 18 %
Water % by weight :	Weighted average: 0 %
VOC content :	314.7 g/l
VOC content, Ready-for-use mixture :	337.9 g/l
TOC Content :	Weighted average: 269 g/l
Solvent Gas :	Weighted average: 0.077 m³/l

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials

Highly reactive or incompatible with the following materials: oxidizing materials.
Reactive or incompatible with the following materials: reducing materials.

10.6 Hazardous decomposition products

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed:

Decomposition products may include the following materials: carbon oxides sulfur oxides metal oxide/oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Exposure to component solvent vapor concentrations may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Accidental swallowing may cause stomach pain. Chemical lung inflammation may occur if the product is taken into the lungs via vomiting.
Epoxy and amine containing products can cause skin disorders such as allergic eczema. The allergy may arise after only a short exposure period.

Acute toxicity

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
bisphenol F-(epichlorhydrin) epoxy resin MW =< 700	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	6350 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
iso-butanol	LC50 Inhalation Vapor	Rat	19200 mg/m³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-
ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Acute toxicity estimates

Route	ATE value
Dermal	9389.1 mg/kg
Inhalation (gases)	34309.5 ppm
Inhalation (vapors)	76.99 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure
bisphenol F-(epichlorhydrin) epoxy resin MW =< 700	Skin - Mild irritant	Rabbit	-	-
	Eyes - Mild irritant	Rabbit	-	-
xylene	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams
ethylbenzene	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams
	Respiratory - Mild irritant	Rabbit	-	-
	Eyes - Mild irritant	Rabbit	-	-

Sensitizer

Product/ingredient name	Route of exposure	Species	Result
bisphenol F-(epichlorhydrin) epoxy resin MW =< 700	skin	Mouse	Sensitizing

Mutagenic effects

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Teratogenic effects

No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
iso-butanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	Not determined	hearing organs

Aspiration hazard

Product/ingredient name	Result
ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

SECTION 11: Toxicological information

Sensitization : Contains bisphenol F-(epichlorhydrin) epoxy resin MW =< 700, octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine. May produce an allergic reaction.

Other information : No additional known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Do not allow to enter drains or watercourses. Harmful to aquatic life with long lasting effects.

Product/ingredient name	Result	Species	Exposure
Bisphenol F-(epichlorhydrin) epoxy resin MW =< 700	Acute EC50 9.4 mg/l	Algae	72 hours
	Acute EC50 1.7 mg/l	Daphnia	48 hours
	Acute LC50 1.5 mg/l	Fish	96 hours
iso-butanol	Chronic NOEC 4000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
ethylbenzene	Chronic NOEC <1000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
xylene	-	>60 % - Readily - 28 days	-	-
ethylbenzene	-	>70 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Bisphenol F-(epichlorhydrin) epoxy resin MW =< 700	-	10 - 16%; 28 day(s)	-
xylene	-	-	Readily
ethylbenzene	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Bisphenol F-(epichlorhydrin) epoxy resin MW =< 700	3.242	31	low
xylene	3.12	8.1 - 25.9	low
iso-butanol	1	-	low
ethylbenzene	3.6	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : No known data avaliable in our database.

Mobility : No known data avaliable in our database.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Residues of the product is listed as hazardous waste. Dispose of according to all state and local applicable regulations. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Spillage, remains, discarded clothes and similar should be discarded in a fireproof container.

European waste catalogue no. (EWC) is given below.

European waste catalogue (EWC) : 08 01 11*

Packaging

The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transport information

Transport may take place according to national regulation or ADR for transport by road, RID for transport by train, IMDG for transport by sea, IATA for transport by air.

	14.1 UN no.	14.2 Proper shipping name	14.3 Transport hazard class(es)	14.4 PG*	14.5 Env*	Additional information
ADR/RID Class	UN1263	PAINT	3	III	No.	**Special provisions** 640 (E) **Tunnel code** (D/E)
IMDG Class	UN1263	PAINT. (bisphenol F-(epichlorhydrin) epoxy resin MW =< 700)	3	III	Yes.	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. **Emergency schedules (EmS)** F-E, S-E
IATA Class	UN1263	PAINT	3	III	No.	The environmentally hazardous substance mark may appear if required by other transportation regulations.

PG* : Packing group
Env.* : Environmental hazards

14.6 Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH) Annex XIV - List of substances subject to authorization - Substances of very high concern

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

Other EU regulations

Seveso category This product is controlled under the Seveso III Directive.

Seveso category
P5c: Flammable liquids 2 and 3 not falling under P5a or P5b C6: Flammable (R10)

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Abbreviations and acronyms :

ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
EUH statement = CLP-specific Hazard statement
RRN = REACH Registration Number
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration

Full text of abbreviated H statements :

H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373 (hearing organs)	May cause damage to organs through prolonged or repeated exposure. (hearing organs)
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS] :

Acute Tox. 4, H312	ACUTE TOXICITY (dermal) - Category 4
Acute Tox. 4, H332	ACUTE TOXICITY (inhalation) - Category 4
Aquatic Chronic 2, H411	AQUATIC HAZARD (LONG-TERM) - Category 2
Aquatic Chronic 3, H412	AQUATIC HAZARD (LONG-TERM) - Category 3
Asp. Tox. 1, H304	ASPIRATION HAZARD - Category 1
Eye Dam. 1, H318	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Flam. Liq. 2, H225	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1, H317	SKIN SENSITIZATION - Category 1
STOT RE 2, H373 (hearing organs)	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (hearing organs) - Category 2
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
STOT SE 3, H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
FLAMMABLE LIQUIDS - Category 3	On basis of test data
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method

Notice to reader

Indicates information that has changed from previously issued version.

The information contained in this safety data sheet is based on the present state of knowledge and EU and national legislation. It provides guidance on health, safety and environmental aspects for handling the product in a safe way and should not be construed as any guarantee of the technical preformance or suitability for particular applications.
It is always the duty of the user/employer to ascertain that the work is planned and carried out in accordance with the national regulations.

Certificate

This is to certify that
Andrea Jones
Progress Rail Services
has successfully completed

DOT Hazardous Materials Training

and has been trained and tested in General Awareness, Function-Specific, Safety, and Security Awareness in accordance with the requirements of the US Department of Transportation at 49 CFR 172.702 and 49 CFR 172.704

presented by

Environmental Resource Center
101 Center Pointe Drive, Cary, NC 27513 919-469-1585
www.ercweb.com

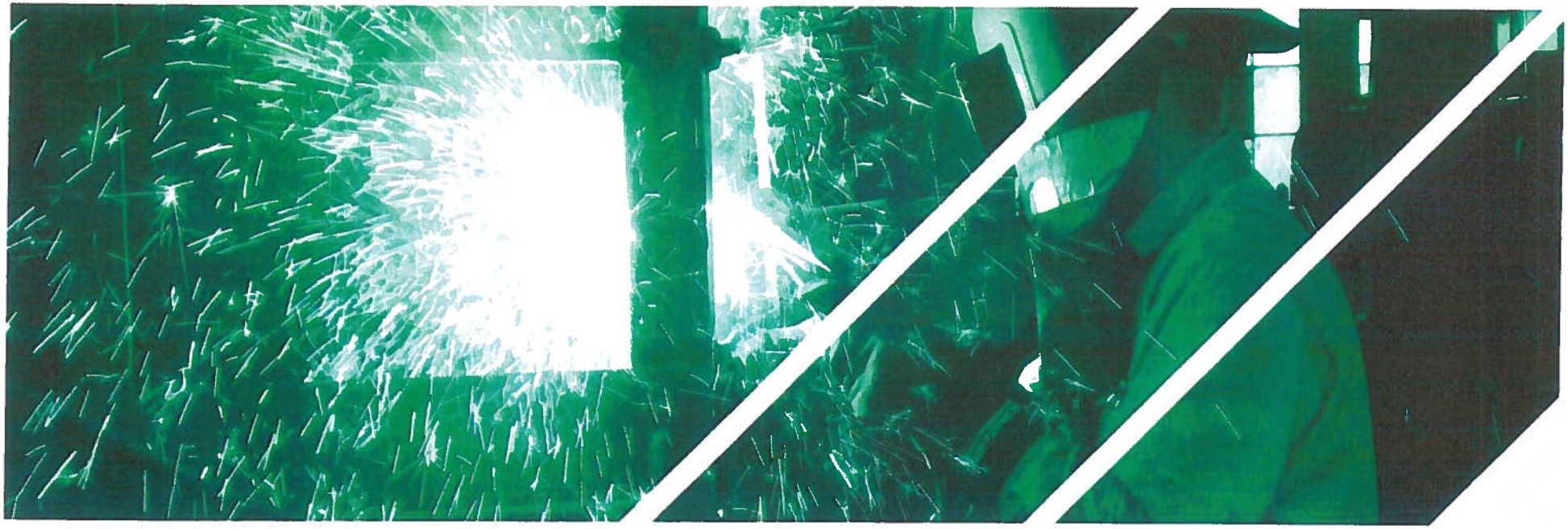
Andy Smith, Instructor

Employer

February 26, 2015
Certificate Number: 138659

Attachment 34 Page 1 of 3

GBW
RAILCAR SERVICES, LLC



Department of Transportation Training – CFR 172.704

GBW RAILCAR SERVICES, LLC

Task Specific Training

Training Topic: Hazmat employee awareness training Date: 6/27/16

	Team Member Name: (Printed)	Team Member Signature	Department
1	Matt Ernzen	Matt Ernzen	
2	MICHAEL MOUNT	Michael Mount	
3	Margaret Wells	Margaret Wells	
4	Dewayne Martin	Dewayne Martin	
5	Tabitha Mcrae	Tabitha McRae	
6	Brandee Arnold	Brandee Arnold	QC
7	Carol Hale	Carol Hale	
8	Travis Seetin	[illegible]	QA
9	Keegan Dell	Keegan Dell	Valves
10	Jonathan Oglesby	Jonathan Oglesby	Paint
11	Ryan Williams	[illegible]	Paint
12	Andrea Jones	[illegible]	Safety
13	RYAN SCHAFFER	[illegible]	PM
14	Jerome Moendale	Jerome Moendale	North Shop
15	Todd J. Parker	Todd J. Parker	South Shop
16	BRAD SHUMAKER	Brad Shumaker	South Shop
17	Steve Tuesin	[illegible]	QC
18			
19			
20			
21			

PURPOSE: Use of the ICP minimizes duplication in preparation and use of emergency response plans at the same facility.
This company believes that the use of a single emergency response plan eliminates confusion for facility first responders who often must decide which of their plans is applicable to a particular emergency. This document is designed to be used in varied emergency situations while providing a mechanism for complying with multiple agency requirements. Use of a single integrated plan also improves coordination between facility response personnel and local, state and federal emergency response personnel.

SCOPE: A wide range of regulations governed by several agencies requires development of written facility emergency response plans. GBW-Atchison has decided to follow the voluntary guidelines called the Integrated Contingency Plan (ICP) to consolidate our emergency response plans into one functional document.

DEFINITIONS

- **EHS:** Environmental Health and Safety.
- **EPA:** Environmental Protection Agency
- **ICP:** Integrated Contingency Plan
- **KDHE:** Kansas Department of Health and Environment
- **LEPC:** Local Emergency Preparedness Coordinator
- **PPE:** Personal Protection Equipment
- **UPRR:** Union Pacific Rail Road

PERSONNEL RESPONSIBILITY and REQUIREMENTS

- Andrea Jones - EHS Leader is the facility emergency response coordinator and has authority to make decisions regarding the program function.
- Ryan Schaffer – Alternate for Andrea Jones
- Other Personnel - Duties as stated throughout this procedure

EQUIPMENT and MATERIALS

- Materials and Equipment are as stated throughout this procedure.

ENVIRONMENTAL, HEALTH and SAFETY (EHS) REQUIREMENTS

- Comply with GBW - Atchison EHS procedures and PPE requirements.

1. PROCEDURE

1.1. Our facility has several distinct operations covered by emergency response regulations: They are as follows:

- Rail car repair facility subject to OSHA's Emergency Action Plan; Regulation-29CFR 1910.38(a)
- Safety Management subject to OSHA's Process Safety Management of highly hazardous chemicals-29 CFR1910.119
- Hazardous waste and emergency response (HAZWOPER) –1910.120, subject to EPA's Resource Conservation and Recovery Act Contingency Planning Requirements. Also subject to CFR 264.50 and CFR 265.50.
- Paint and blast operations; subject to the Emergency Planning and Community Right to Know (often called SARA Title III) or EPCRA.
- Hazard Communication, Regulation 29 CFR 1910.1200 (Hazards of all chemicals produced are evaluated and that information is transmitted to employees') **(Also see Hazard Communication Program)**

1.2. Adopting this single plan format facilitates integration of these plans in this facility. This concept also allows coordination of facility plans with plans that are maintained by local emergency planning committees (LEPCs)*. (*LEPC plans are developed by LEPCs in coordination with facility emergency response coordinators under section 303 of the Emergency Planning and Community Right-to-Know Act.)

1.3. In some areas, this company has gone beyond simple coordination of plans and actually integrated certain information from facility plans with corresponding areas of external plans. This single, common ICP outline moves us toward integration of facility plans with local, state, and federal plans.

1.4. Facility hazards need to be addressed in a comprehensive and coordinated manner. Accordingly, this document allows this facility to address a wide range of risks in a manner tailored to facility-specific needs. This includes both physical and chemical hazards associated with events such as chemical releases, oil spills, fires, explosions, and natural disasters.

2. PLAN INTRODUCTION ELEMENTS:

2.1. GBW Rail Services - Atchison is a railcar repair shop operation. We employ processes that use materials of which some may be considered hazardous, including but not limited to the following:

- 6 TON BULK CO2 TANK 1600 GALLON BULK OXYGEN TANK, 3000 GALLON BULK NITROGEN TANK.
- Welding wire for cutting and welding on railcars.
- Blast Media, paint and thinner for painting of railcars and parts are stored in containers ranging from 5 to 55 gallons.
- Spent paint and thinner left over from paint operations and Hazardous waste from car cleaning are contained in 55-gallon drums in the hazardous waste area. **(See attachment F Building 2**)
- Spent blast media is accumulated in barrels at the bag house.
- Non- Hazardous waste from cars cleaned are stored in 55 gallon drums **(south of the hazardous waste storage)** building 2.
- We also have a 9000 Gallon Propane storage tank used for heating our paint and drying rooms during the painting process.
- Cleaning of tank cars by pressure washing on the wash track, and purging and cleaning residue anhydrous ammonia, LPG, Propane and Butane products on the pad, directly west of building one, which would be considered a confined space atmosphere.
- Two 500-gallon propane tanks. One is located at the south end of the paint storage building and the other is located on the north side of our water storage tank, which is used to flare off RR cars.
- Used oil is stored in a 500 gallon tank for recycling by an outside source.
- We have above ground storage tanks of less than 600 gallon containing gas and diesel which is used in forklifts, skid steers, cranes, and mobile trucks.
- Last we have compressed gas cylinders stored outside of Building 1 and at the west end of our tank car waste water storage tank.

3. GENERAL FACILITY IDENTIFICATION INFORMATION:

3.1. Facility name: GBW Rail Services – Atchison

3.2. Owner:

- GBW Railcar Services. LLC
  One Centerpointe Drive, Suite 200
  Lake Oswego, OR 97035
  Phone No. 503-684-7000

3.3. Physical address of the facility:
- GBW Rail Services – Atchison
  15624, 258th Road
  Cummings, Ks. 66016
- DIRECTIONS: Heading South on US Hwy 59 from Atchison, KS. Turn right (west) onto 258th (gravel road) cross the railroad tracks and continue through one left hand (south) and one right hand curve (west). Continue west for approximately 3/8 mile until you see an entrance and a GBW Rail Services sign on your left. Turn left (south) and continues until you reach a stop sign you will see our office straight ahead. Our repair facility will be to the east (towards 59 Hwy).

3.4. Mailing address of the facility:
- GBW Rail Services
  PO BOX 436
  Atchison, KS. 66002

3.5. Other identifying information: Main plant is located on the backside (south) of Cargill Elevator. Fab shop is located NE Side of Elevator.

3.6. Key contact(s) for plan development and maintenance:
- Andrea Jones - EHS Leader
- Ryan Schaffer - Alternate

3.7. Phone number(s) for key contact(s):
- Andrea Jones: Phone No. 866-785-4082 Extension 194344 Cell: 816-516-9175
- Ryan Schaffer: Phone No. 866-785-4082 Extension 194338 Cell: 814-312-4571
- Facility phone number: 866-785-4082
- Facility fax number: 503-802-5458

4. IMPLEMENTATION OF THE INTERGRATED CONTINGENCY PLAN:

4.1. The contingency plan will be implemented if an accident might threaten health or the environment. The principal or alternate coordinator has full authority to make this decision and take the necessary remedial action. Depending upon the degree of seriousness, the following potential emergencies might call for implementation of the Contingency Plan.
- On-site spillage of waste solvents during transfer or storage.
- Accidental ignition of waste solvents.
- Fire or explosion
- Tornado or other natural disaster.
- Accidental release of contaminants into the atmosphere through the paint booth.

5. EMERGENCY RESPONSE NOTIFICATION PROCEDURES:

5.1. Any employee discovering a fire, hazardous release or any other situation that is not readily controllable with equipment and material at hand must notify the closest foreman, supervisor or other administrative personnel available. They will in turn notify all supervisors by use of the two way radio system and contact the EMERGENCY COORDINATOR OR ALTERNATE COORDINATOR.

5.2. All employees will be notified by their supervisor to close down and secure their equipment, proceed to the nearest exit from the property and report to a designated area to await further instructions from the Emergency or Alternate Coordinator. **If in the Judgment of ANY Supervisory Personnel there is immediate need to evacuate the area. The supervisor or his designee will sound 1 long blast on a hand held air horn (located by all building exits) and also contact Building 1 Supervisor or Designee to activate the emergency siren located on Building 1.**

5.3. The principal or alternate facility emergency coordinator shall be contacted as follows when not on site:
- PRINCIPAL – Andrea Jones: Phone No: 816-516-9175
- ALTERNATE – Ryan Schaffer: Cell: 814-312-4571

5.4. The contacted person will then notify one or all of the following agencies/contacts based on the information he has received.
- Wes Lanter: LEPC CORDINATOR ATCHISON COUNTY EMERGENCY PREPAREDNEES Phone No. 913-833-4025 or 911 and request disposition of unit.
- ATCHISON RURAL FIRE DISTRICT # 1 PHONE No. 911 and ask for disposition of the unit.
- ATCHISON COUNTY SHERIFF Phone No. 911 or 913-367-4323 and ask for disposition of unit.
- ATCHISON HOSPITAL PHONE No. 913-367-2131 – for notification of possible dispatch of equipment.
- KANSAS DEPTARTMENT OF HEALTH and ENVIREOMENT MAIN PHONE # 785 296 1600. Also see flow chart at the end of this plan for KDHE contact information when ***REPORTABLE*** Hazardous Material Spills or Toxic Releases occur.
- EPA REGION VII OFFICE Phone No. 913-551-7003 or 800-223-0425
- NATIONAL RESPONSE CENTER Phone No. 800-424-8802 and include the following.
  - Name and telephone number of the reporter.
  - Name and address of the facility.
  - Time and type of incident.
  - Identification and quantity of any material involved.
  - The extent of any injuries.
  - The possible hazards to the environment and human health outside the facility.
  - OSHA (as necessary) Phone No. 800-321-6742.
  - Notification of outside sources - **See flow chart attachment at the end of this procedure.**

6. HAZARD CONTAINMENT AND CONTROL:

6.1. The Emergency coordinator will take all necessary measures to contain the hazard within the plant and to prevent its spread to other nearby facilities or the environment, with the assistance of plant and emergency personnel assigned by the various parties contacted.

6.2. In case of a spill, absorbent material will be placed on the spill. A skid steer with bucket will be used to scrape any contaminated soil, which will be considered too hazardous unless analysis shows otherwise. If needed additional equipment will be obtained by calling contractors in the local area, until one can be located.

6.3. In case of an uncontainable fire or explosion the facility will be evacuated.

6.4. The Emergency Coordinator will employ one or more of the following measures to ensure maximum protection of safety and health of employees and nearby residents: Use of appropriate personal protection equipment, dismiss all nonessential personnel, and advise the contacted Local LEPC coordinator present on the desirability of evacuating certain sections of the surrounding community.

7. FOLLOW-UP ACTIONS:

7.1. Following containment and control of the emergency, the Emergency Coordinator assisted by the Plant Manager will do the following:
- Provide for collection, treatment, and disposal of the waste and contaminated soil, water, or other materials by the emergency crew or outside contractors, as appropriate.
- Investigate the cause of the emergency and will take steps to prevent a recurrence of such or similar incidents.
- Will make sure that the cause of the emergency has been eliminated and that the cleanup and restoration have progressed at least to the point of not jeopardizing the health and safety of the employees, or environment, and that the EPA, state and local authorities have been notified, before permitting resumption of the operations affected by the emergency.

8. EMERGENCY EQUIPMENT:

8.1. Each work area is equipped with a chemical fire extinguisher. **(See Attachment F - Exit Door and Fire Extinguisher Locations)**

8.2. The facility has an adequate water supply for washing down small spills.

8.3. A 17 H 55 gallon barrel located at the **south end of the blast booth** contains a supply of absorbent material, & safety equipment.

8.4. A skid steer loader with bucket is used to help contain emergency spills and for cleanup of ground soil.

8.5. First aid stations are located in the following areas:

- Building 1 on the fencing directly across from the maintenance doorway.
- Building 2 from the SE office doorway halfway down the exterior office outside wall.
- Building 2 upstairs underneath the sink.
- Building 3 the NW corner of the restroom. Blood Borne Pathogen Kits are located at these same locations.
- Main office in the lunch room.

8.6. Eye Wash and shower station is located in Building 2, on the West- side of the stencil track along the outside paint booth wall.

8.7. Additional eye wash stations are located in the following areas:

- Building 1 Restroom.
- Building 2 Lunch Room.
- Building 3 Restroom.
- Materials Building – Outside office wall.

8.8. Emergency Confined Space Rescue Equipment is located in the following area:

- Building 2 – North West corner, directly north of the foreman's office.

8.9. A man down system is used for all employees entering confined spaces as stated in our Confined Space Procedure.

8.10. Air horns, emergency sirens, and radios will be used to coordinate emergency efforts.

8.11. Telephone numbers of the emergency coordinators and other emergency contacts will be posted in all offices with phones.

9. COORDINATION AGREEMENTS:

9.1. Copies of the ICP and MSDS / SDS of hazardous chemicals in excess of minimum thresholds, on site, have been provided to the following agencies:

- Atchison Rural Fire District No. 1: Emergency No. 911, all other calls 913-367-2090
- Atchison County Emergency Preparedness: Emergency No. 911(Courthouse)
- Atchison Hospital: Emergency No. 911, all other calls 913-367-2131
- Atchison County Sheriff: Emergency No. 911 or 913-367-0216 or 913 367-4323
- A copy of this ICP and other hazardous materials and waste documentation are also kept in the main office building.

9.2. Copies of this plan have been provided so that all individuals and agencies responsible for the administration, regulation, and emergency response to the facility will be familiar with the types of materials at the facility that could possibly pose a threat to human health and the environment. This will make them aware of the facilities' capability to respond to an emergency resulting from accidental fire, spillage or discharge of those materials. The information should aid emergency response teams in providing aid to possible victims and assisting plant personnel in combating an emergency situation.

10. PLANT EVACUATION PLAN:

10.1. Facility personnel will be evacuated if the Emergency Coordinator decides that their personal safety is in danger.

10.2. Evacuation will take place through exit(s) that are closest to the employee's workstation.

10.3. The Emergency coordinator will advise the state or local official present on the scene if evacuation of surrounding residential areas is advisable. The decision to do so will be made by the senior state or local official. In the absence of a state or local official, it will be the responsibility of the Emergency Coordinator to advise local residents to evacuate if necessary.

11. REQUIRED REPORTS:

11.1. In the event of any accident or emergency covered under this plan, the Facility Operator will notify EPA Regional Administrator, The Kansas Department of Health and Environment, appropriate local authorities and also advise what follow up actions have been implemented.

11.2. The operator will note the time, date, and details of any incident that requires implementation of the Integrated Contingency Plan, and will submit a written report on the incident to the EPA Regional Administrator and the KDHE in accordance with 40 CFR 265.56(J).

11.3. The Emergency Coordinator, with the aid of the Plant Manager will revise this ICP in accordance with the experience acquired during each emergency situation and will send copies of the revisions to each holder of the original plan.

12. EMERGENCY EVACUATION (ACTION) PLAN:

- At the time of an emergency requiring evacuation all employees, contractors, visitors, vendors etc.; will assemble at the assigned Evacuation Assembly Areas. The Emergency Coordinator has designated Margaret Wells or her designee Deena Christopher to:
- Bring a present copy of our employee listing and the visitor login binder.
- Conduct a Roll Call for all employees who have clocked in and all others that are still signed in on the visitor login sheet, as being at the facility. This will be used to determine whether any one is missing and may be trapped in the affected area.
- Have Andrea Jones or Ryan Schaffer contact Evacuation Assembly Area(s) to verify final roll call.

- In the event that an emergency evacuation of the plant is required due to fire, hazardous material release, spill or an emergency at the elevator (located adjacent to our shop) we will do the following.
- A manually operated Air Horn (located by all marked exits) and an air siren will be sounded, signaling a need for immediate evacuation of the plant.
- The Supervisor or his / her designee, over the area of cause for evacuation, will sound the air horn and the emergency siren. If the emergency siren is not in his / her area then he / she will contact the personnel in that area to activate the emergency siren.
- Handheld radios may also be used for communication between supervisory personnel and the Pant Manager, Emergency Coordinator or designee.

- Upon hearing **1 LONG BLAST** on the air horn and / or emergency siren, all employees will immediately proceed via the closest exit, to their respective assembly areas where they will receive further instructions from their supervisor.

12.2. Evacuation Assembly areas are as follows:

- **BUILDING 1 & Steel Storage Tank:** South End of Property adjacent to crossing at RR tracks.
- **Alternate Assembly Area Building 1:** If in the opinion of the acting supervisor, wind or other hazards prevent assembly at south end of property, building 1 may assemble at the building 3 assembly area.
- **BUILDING 2:** South End of Property on the road adjacent to crossing at RR tracks.
- **BUILDING 3:** At Entrance of Road 15624 (northeast corner of Cargill Property).

12.3. Evacuation Plan Maps are located as follows:

- In the lunch room -Buildings one and two.
- On the inside office wall of building 3.
- On the inside office wall of the materials building.

12.4. All employees will remain at their designated meeting point until the alternate emergency coordinator has verified the head count and all employees and visitors, contractors etc. have been accounted for. **(See Site Plan at the end of this procedure)**

12.5. The following personnel will be responsible for actions to be taken in the event of any emergency evacuation.

- **DAYSHIFT: Ryan Schaffer, Ryan Diefenbach, Mitchel Weinmann, and Keegan Delk** or their designee is responsible for employee verification of all personnel in the shop buildings or surrounding areas (such as switch men, contractors, visitors, etc. These Individuals will also be responsible for a head count of the above personnel at the respective meeting points.

- **Margaret Wells or her substitute Ryan Diefenbach** is responsible for employee call in of personnel not reporting for work and visitors or contractors at the plant. She will also be responsible for giving this list to Don Lassen or Sam Davis.

12.6. **BUILDING ONE: On duty Maintenance and / or Ryan Schaffer** is responsible for shut down of main electrical disconnects in, bulk systems (CO2 and oxygen) main shutoffs, 500-gal propane tank at north side of water storage tank, and propane main shutoffs at SW end of building #2 and the 9000-gallon propane tank.

- There are **three electrical shutoffs** and they are located and stenciled as follows: **Two** on the exterior NE corner maintenance office wall and the other shutoff is located on the NW wall of the building immediately adjacent to the exit door. All three are stenciled **Emergency Electrical Disconnect.**

12.7. **BUILDING TWO: Ryan Schaffer or designee** is responsible for shut down of all main electrical disconnects and air compressor disconnects in that building.

- There are **three electrical shutoffs on two panels** and they are located and stenciled as follows: All three shut offs are on the NW wall **Next to the Air Compressors.** They are stenciled, **EMERGENCY DISCONNECT.**

12.8. **BUILDING THREE: Keegan Delk or their designee** is responsible for shutting off the main electrical disconnect in building 3 and retrieval of the first aid kit.

- The main disconnect in building 3 is located in the Northwest corner of the control room and is stenciled **EMERGENCY DISCONNECT.**

12.9. **Personnel performing flaring operations** are responsible for turning off the fuel supply from any tank car being flared at the flare tower vaporizer unit.

- ***"IMPORTANT" SHUTTING OFF OF THE ABOVE POWER AND FUEL SUPPLIES MAY BE DELETED IF THE RESPONSBLE PARTY(S) MAKES THE IMMEDIATE DETERMINATION THAT SHUTING OFF SAID EQUIPMENT MAY ENDANGER LIFE OR HEALTH OF ANY EMPLOYEE(S).***

- **Mitchell Weinmann or his substitute** will be responsible for shutting off the valve on the 500-gallon propane tank located on the south end of the paint storage building.

- **Daniel Weaver,** or substitute will be responsible for retrieving the first aid kit from the kitchen of the main office and taking it to the assembly area for buildings # 1 and 2.

- **Andrea Jones or alternate** will be responsible for contacting EMERGENCY PREPARDNESS, FIRE DEPARTMENT, AND SHEIRFF'S OFFICE, (911), and the UP Railroad local yardmaster367-5600.

12.10. **The Respective Second or Third Shift Supervisor** is responsible for building shutoffs in the following order, or at his/her discretion any or all of them.

- Propane shutoff at SW corner of building 2.
- Electric shutoffs NW corner by air compressors building 2.
- Bulk systems main shutoffs for CO2 and Oxygen.
- Propane shutoff at the 9000 gallon Propane tank.
- Shutoff of paint storage propane tank located at the South end of paint storage.
- At his/her discretion, Building 1, the (2)-500 gallon propane tanks and turning off the fuel supply from any tank car being flared.

- **The Second or Third Shift Supervisor** is also responsible for assigning or performing:
  - Employee head count verification.
  - Re-assigning any of the above emergency evacuation procedures for the night shift.
  - Contacting 911 and Emergency Coordinator(s).

  - **Ryan Schaffer, Plant Manager,** or his designee Scott Davis, GBW Regional Vice President, will be responsible for communicating with the media using guidelines issued by Greenbrier Rail Services Guidelines.

13. CONFINED SPACE RESCUE:

13.1. In the event a confined space entry rescue is required GBW does the following:

- The confined space attendant will notify the entry supervisor, which in turn will notify GBW emergency rescue personnel rescue, is required, and give them the specific location in the plant.
- GBW emergency rescue personnel will take or coordinate bringing the rescue kit to the required area.
- The entry supervisor will then notify at least one of the following, GBW Plant Manager, EHS Manager or Plant receptionist, which in turn will notify the appropriate outside emergency personnel shown in section 5 of this procedure as / if required.

14. CONTAINABLE FIRE:

14.1. The emergency or alternate coordinators are responsible for determining if our own equipment can control a fire. They have subsequently given this authority to any supervisory personnel at the shop for the express purpose of preventing an emergency response evacuation.

14.2. If in the supervisor(s) determine that the fire can be controlled by our own equipment, they may either put out the fire themselves or designate helpers from the work force to help put out said fire.

15. MEDICAL TREATMENT/INJURY:

15.1. In lieu of trained emergency personnel; Ryan Schaffer or Andrea Jones in coordination with Steve Davis, or one our First Aid / CPR Personnel are responsible for determining how the employee(s) will be treated. This includes transportation to the hospital.

15.2. The following employees have received BBP, CPR, and FIRST AID TRAINING. In the event of injury or illness where immediate help is needed, a member(s) of the first aid team will be summoned.

- Joaquin Campos, Darren Kelly, Tabitha McRae, Lloyd (Dick) Page, Jason Seager and Andrea Jones.

16. MISCELLANEOUS INSTRUCTIONS:

16.1. **IN THE EVENT OF A TORNADO WATCH** all employees will take shelter in the employee restroom of each building. Once the danger has passed, their supervisor will verify the head counts to assure all employees are accounted for. **(EMERGENCY SIGNAL IS BY HANDHELD RAIDO CONTACT BETWEEN SUPERVISORY PERSONNEL & THEN DIRECT EMPLOYEE NOTIFICATIONS)**

16.2. **IN THE EVENT OF A DISGRUNTLED EMPLOYEE** the principal and/or alternate emergency coordinator will assess the emergency and notify supervisors by radio of any changes from the primary evacuation plan.

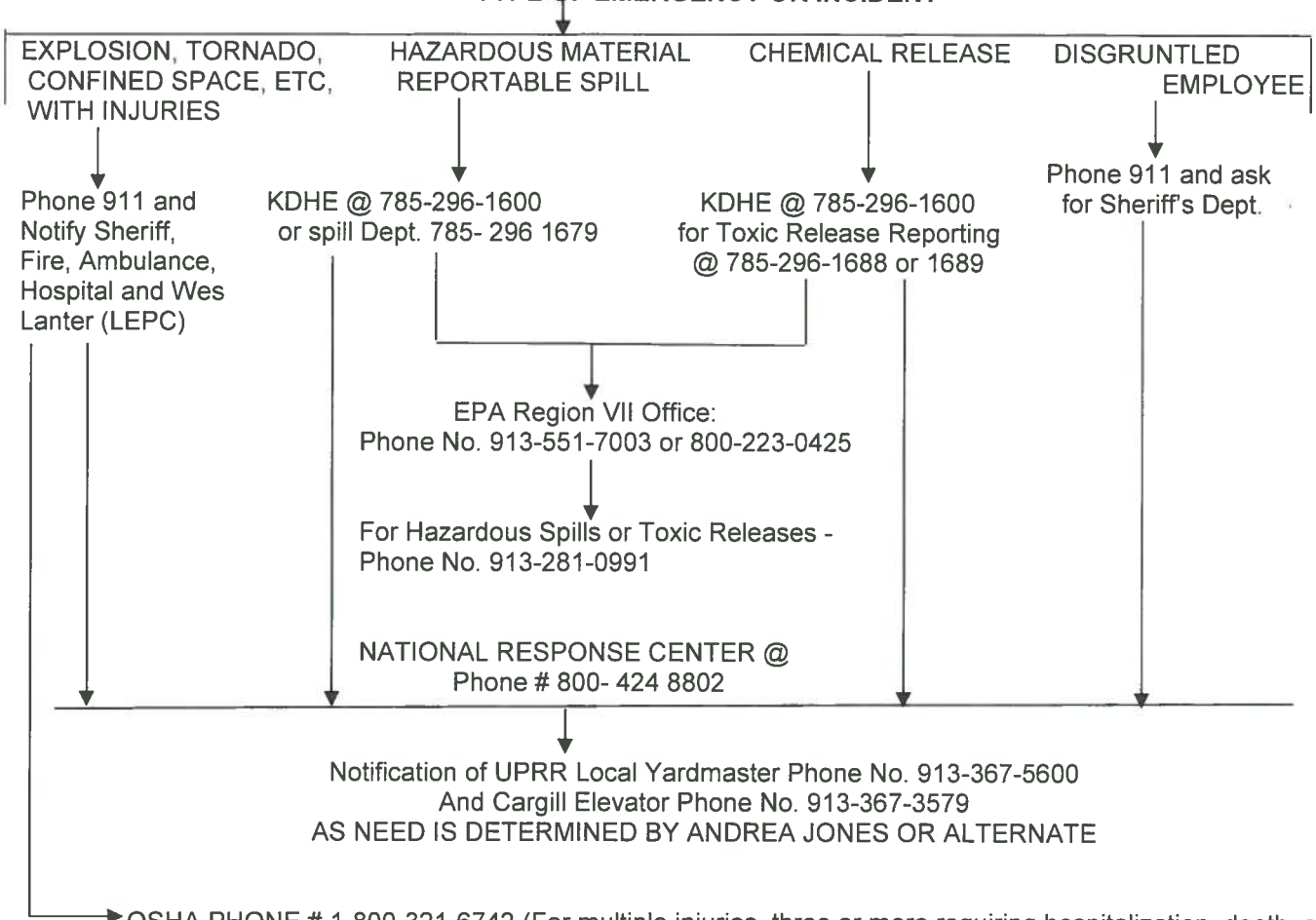
16.3. THIS INTEGEGRATED CONTINGENCY PLAN IS AN APPENDIX TO GREENBRIER RAIL SERVICES EHS WORKPLAN AND IS LISTED AS SUCH IN THE EHS PLAN.

17. ATTACHMENTS:

17.1. Attachments are as follows:

- **Flow Chart:** Order of Notification for Outside Sources
- **Attachment F:** Fire Extinguisher Locations
- **SITE PLAN:** FOR EMERGENCY EVACUATION & LOCATION OF any flammable material, hazardous chemicals, etc.

FLOW CHART FOR ORDER OF NOTIFCATION FOR OUTSIDE SOURCES
TYPE OF EMERGENCY OR INCIDENT



OSHA PHONE # 1-800-321-6742 (For multiple injuries, three or more requiring hospitalization, death, or heart attack, all to be reported within 8 hours including weekends).

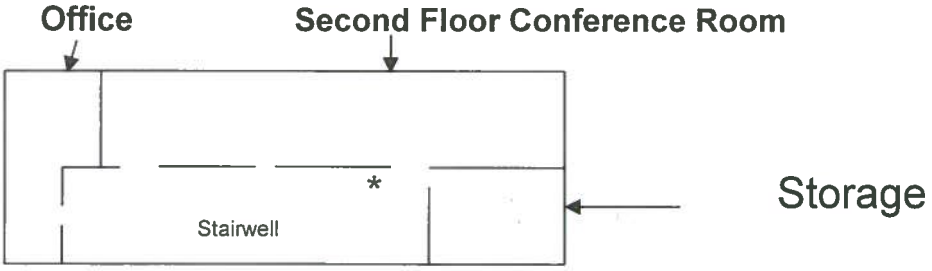
GBW EHS Manager Signature:_____ Printed Name: Andrea Jones Date: 8/10/2016

ATTACHMENT F
BUILDING ONE (OLD SHOP)
SMALL OPENINGS ARE INTERIOR AND EXTERIOR EXIT DOORS

FIRE EXTINGUISHER LOCATIONS DESIGNATED BY *

ATTACHMENT F
BUILDING TWO (NEW SHOP)
SMALL OPENINGS ARE EXTERIOR AND INTERIOR EXIT DOORS

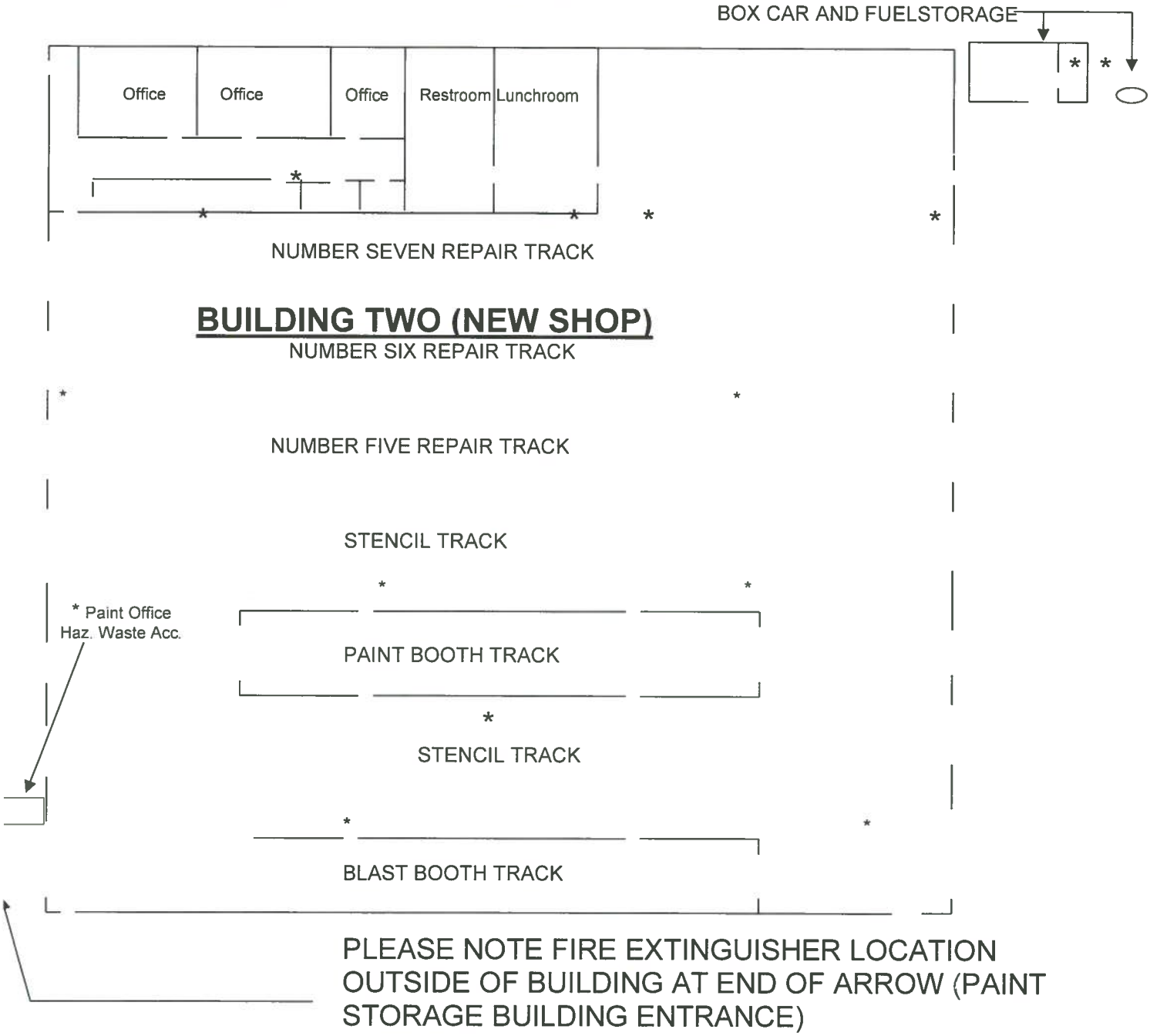
FIRE EXTINGUISHER LOCATIONS DESIGNATED BY *



ATTACHMENT F

BUILDING TWO (NEW SHOP)

SMALL OPENINGS ARE EXTERIOR AND INTERIOR EXIT DOORS



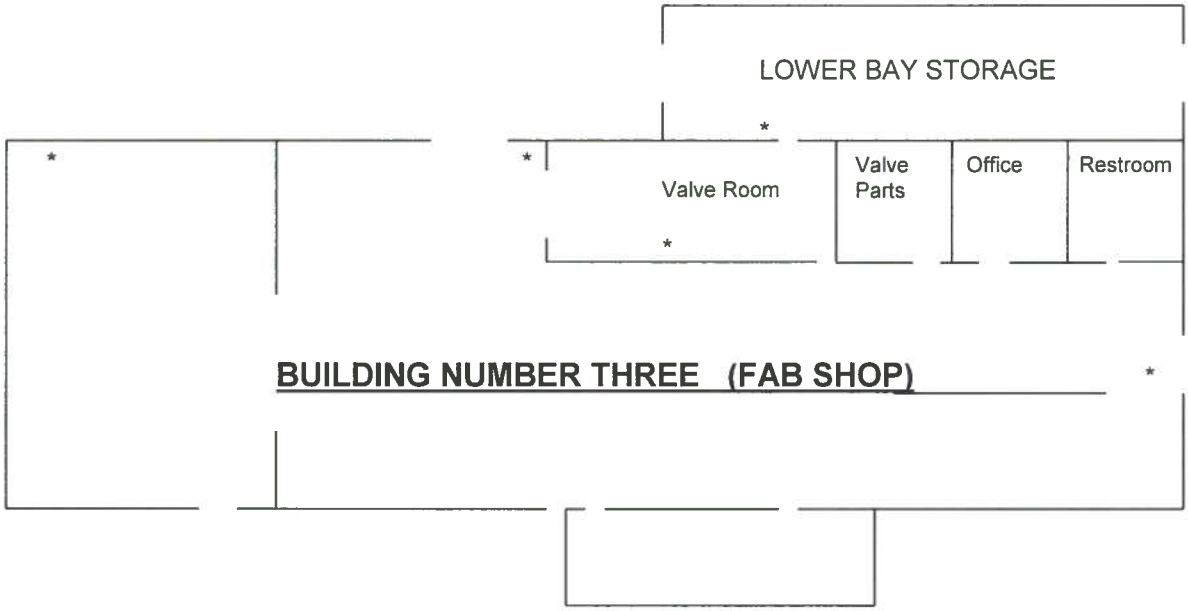
PLEASE NOTE FIRE EXTINGUISHER LOCATION OUTSIDE OF BUILDING AT END OF ARROW (PAINT STORAGE BUILDING ENTRANCE)

ATTACHMENT F

BUILDING THREE (FAB SHOP)

SMALL OPENINGS ARE EXTERIOR AND INTERIOR DOOR OPENINGS

FIRE EXTINGUISHER LOCATIONS DESIGNATED BY *

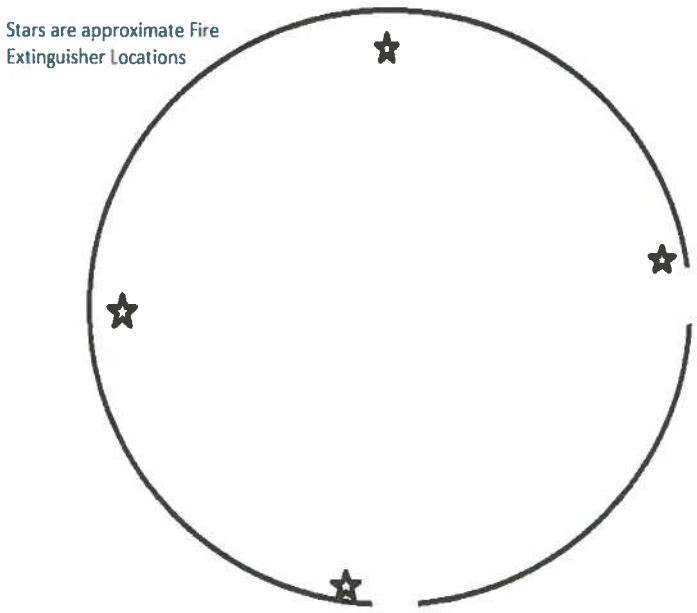


ATTACHMENT F

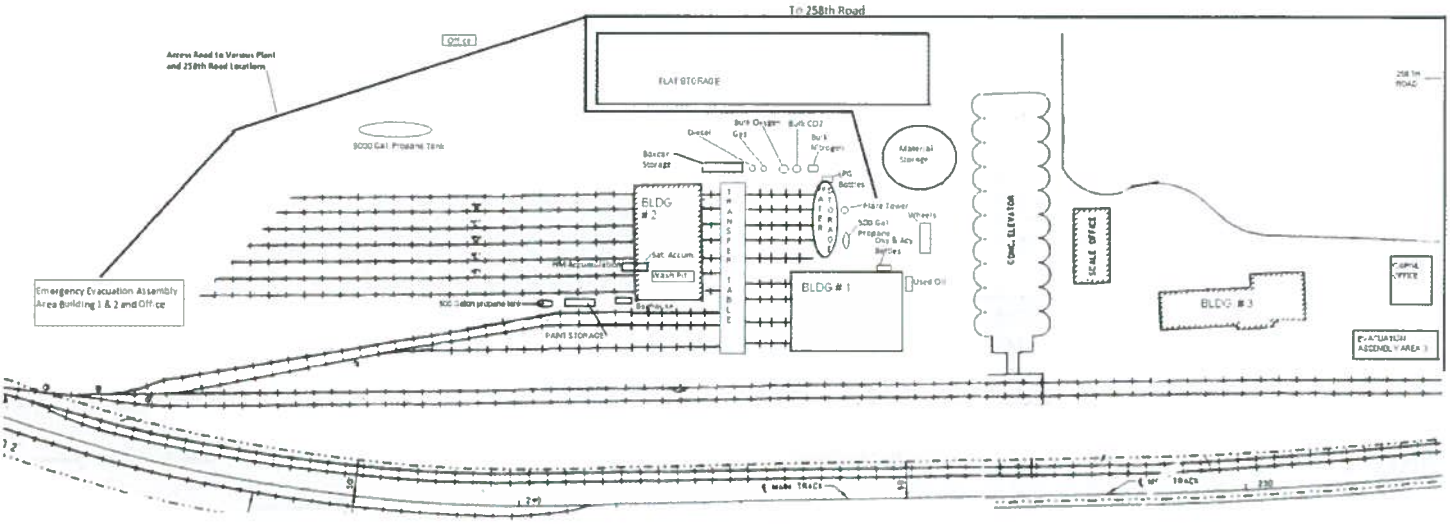
STORAGE TANK - MATERIALS

SMALL OPENINGS ARE EXTERIOR AND INTERIOR DOOR OPENINGS

FIRE EXTINGUISHER LOCATIONS DESIGNATED BY *



GBW SITE PLAN & EMERGENCY EVACUATION AREAS



GBW EMERGENCY ASSEMBLY AREAS for BUILDINGS 1, 2, 3 and OFFICE

REQUIRED APPROVALS:

Approval: _____
Andrea Jones – EHS Manager

Approval: _____
Ryan Schaffer – Plant Manager

CHANGE RECORD:

Revision	Date	Responsible Person	Description of Change(s)
0	18 Sept. 2014	Don Lassen	Original Issue
1	5/28/2015	Andrea Jones	1st Revision – Change of EHS Managers.
2	06/15/2015	Andrea Jones	Information change in One Plan
3	02/24/2016	Andrea Jones	Update and Signatures for 2015 KDHE Tier II
4	8/10/2016	Andrea Jones	Information Change

PHOTO LOG

Facility Name/City: GBW Railcar Services, LLC, 15624 258th Road, Cummings, Kansas 66016
Facility ID #: KSD043936277
Date: August 9-10, 2016
Photographer: Michael J. Martin
Type of Camera: Nikon Coolpix AW100, Serial #: 32156576
Digital Recording Media: Flashcard
All digital photos were copied by: Michael J. Martin on August 26, 2016.
All digital photos were copied to: CD-R
Original copy is stored in: CD-R Digital photos were downloaded to CD-R by Michael J. Martin. Michael J. Martin
No changes were made in the original image files prior to storage on the CD-R.

Report Photo#	Photographer	Date	Approx. Time	File Name (DSCNxxxx.jpg)	Description
1	Michael J. Martin	08/09/2016	12:19 PM	1793	Photo of one ¾ full 55-gallon drum of spent PPE located at the Equipment Boxcar. Photo taken facing southeast.
2	Michael J. Martin	08/09/2016	12:22 PM	1794	Photo of one full 10-gallon drum of unknown liquid located at the Equipment Boxcar. Photo taken facing west.
3	Michael J. Martin	08/09/2016	12:45 PM	1795	Photo of fourteen 55-gallon hazardous waste storage drums of crude oil waste containing solids and one 55-gallon drum of waste denatured ethanol/water mixture located at Hazardous Waste Storage Area 1. Photo taken facing northeast.
4	Michael J. Martin	08/09/2016	12:45 PM	1796	Photo of one ½ full 55-gallon hazardous waste storage drum of crude oil waste containing solids located at Hazardous Waste Storage Area 1. Photo taken facing south.
5	Michael J. Martin	08/09/2016	12:46 PM	1797	Photo of one 55-gallon hazardous waste storage drum of crude oil waste containing solids (non-labeled and non-dated) located at Hazardous Waste Storage Area 1. Photo taken facing west.

6	Michael J. Martin	08/09/2016	12:46 PM	1798	Photo of one 55-gallon hazardous waste storage drum of crude oil waste containing solids (drum lid severely dented) located at Hazardous Waste Storage Area 1. Photo taken facing east.
7	Michael J. Martin	08/09/2016	12:47 PM	1799	Photo of two 55-gallon hazardous waste storage drums of crude oil waste containing solids (non-labeled and non-dated) (yellow arrows) and one 55-gallon drum of waste denatured ethanol/water mixture (green arrow) located at Hazardous Waste Storage Area 1. Photo taken facing east.
8	Michael J. Martin	08/09/2016	12:49 PM	1800	Photo of one 55-gallon drum of waste denatured ethanol/water mixture (same drum in Photo 7) located at Hazardous Waste Storage Area 1. Photo taken facing southeast.
9	Michael J. Martin	08/09/2016	12:50 PM	1801	Same image as Photo 3. Photo taken facing north.
10	Michael J. Martin	08/09/2016	12:50 PM	1802	Same image as Photo 3. Photo taken facing north.
11	Michael J. Martin	08/09/2016	12:54 PM	1803	Same image as Photo 8. Photo taken facing north.
12	Michael J. Martin	08/09/2016	12:56 PM	1804	Photo of one 3,500-gallon AST (bulk tank) of non-crude oil wastewater located at the Wastewater Storage Area. Photo taken facing northwest.
13	Michael J. Martin	08/09/2016	1:00 PM	1805	Photo of one 55-gallon hazardous waste storage drum of crude oil waste containing solids located at Hazardous Waste Storage Area 1. Photo taken facing southwest.
14	Michael J. Martin	08/09/2016	1:00 PM	1806	Same image as Photo 13. Photo taken facing southwest.
15	Michael J. Martin	08/09/2016	1:02 PM	1807	Photo of one 20-cubic yard roll-off container of spent glass blasting media located at the Spent Blasting Media Storage Area. Photo taken facing north.
16	Michael J. Martin	08/09/2016	1:02 PM	1808	Same image as Photo 15. Photo taken facing north.

17	Michael J. Martin	08/09/2016	1:03 PM	1809	Photo of one 20-cubic yard roll-off container of spent glass blasting media located at the Spent Blasting Media Storage Area. Photo taken facing southeast.
18	Michael J. Martin	08/09/2016	1:08 PM	1810	Photo of one full 55-gallon drum of kerosene located at the Paint Storage Boxcar. Photo taken facing south.
19	Michael J. Martin	08/09/2016	1:08 PM	1811	Same image as Photo 18. Photo taken facing south.
20	Michael J. Martin	08/09/2016	1:11 PM	1812	Photo of the Blast Shop baghouse collection unit. Photo taken facing north.
21	Michael J. Martin	08/09/2016	1:14 PM	1813	Photo one 55-gallon hazardous waste satellite accumulation drum of aerosol puncturing liquid waste (bulging at the top of the drum lid) located at the Paint Shop. Photo taken facing southeast.
22	Michael J. Martin	08/09/2016	1:14 PM	1814	Same image as Photo 21. Photo taken facing north.
23	Michael J. Martin	08/09/2016	1:15 PM	1815	Photo one 55-gallon hazardous waste satellite accumulation drum of waste paint (not labeled with the words "Hazardous Waste") located at the Paint Shop. Photo taken facing northeast.
24	Michael J. Martin	08/09/2016	1:16 PM	1816	Photo one 55-gallon hazardous waste satellite accumulation drum of waste paint (labeled with the words "Hazardous Waste") located at the Paint Shop. Photo taken facing northeast.
25	Michael J. Martin	08/09/2016	1:21 PM	1817	Photo one 55-gallon hazardous waste storage drum of waste paint/solvent mixture (labeled with the words "Hazardous Waste," marked with the 08/09/2016 accumulation start date, and labeled per DOT) located at Hazardous Waste Storage Area 2. Photo taken facing southwest.
26	Michael J. Martin	08/09/2016	1:27 PM	1818	Photo of one ½ full 5-gallon pail of spent MEK rags located at the Paint Shop. Photo taken facing southeast.
27	Michael J. Martin	08/09/2016	1:27 PM	1819	Same image as Photo 26. Photo taken facing southeast.

28	Michael J. Martin	08/09/2016	1:36 PM	1820	Photo of one ¾ full 55-gallon drum of waste paint related material located at the Paint Shop. Photo taken facing south.
29	Michael J. Martin	08/09/2016	2:01 PM	1821	Photo of one 20-cubic yard container of scrap metal located at the Scrap Metal Storage Area. Photo taken facing northwest.
30	Michael J. Martin	08/10/2016	8:12 AM	1822	Photo of one blasting unit located at Building 3. Photo taken facing west.
31	Michael J. Martin	08/10/2016	8:18 AM	1823	Photo of the NDT Area located at Building 3. Photo taken facing south.
32	Michael J. Martin	08/10/2016	8:18 AM	1824	Photo of two aerosol cans of SKC-S cleaner, one aerosol can of SKL-WP2 penetrant, and one aerosol can of SKD-S2 developer located in the NDT Area at Building 3. Photo taken facing southwest.
33	Michael J. Martin	08/10/2016	8:18 AM	1825	Photo of one empty 11¼ by 8¾ by 5 inch corrugated cardboard located in the NDT Area at Building 3. Photo taken facing south.
34	Michael J. Martin	08/10/2016	8:31 AM	1826	Photo of one sheer unit and at least 20 yellow absorbent pads (10 by 10 foot long used oil release area) located at Building 3. Photo taken facing northeast.
35	Michael J. Martin	08/10/2016	8:31 AM	1827	Same image as Photo 34. Photo taken facing east.
36	Michael J. Martin	08/10/2016	8:31 AM	1828	Same image as Photo 34. Photo taken facing southeast.
37	Michael J. Martin	08/10/2016	8:32 AM	1829	Same image as Photo 34. Photo taken facing south.
38	Michael J. Martin	08/10/2016	8:32 AM	1830	Same image as Photo 34. Photo taken facing south.
39	Michael J. Martin	08/10/2016	8:32 AM	1831	Same image as Photo 34. Photo taken facing south.
40	Michael J. Martin	08/10/2016	8:32 AM	1832	Photo of one 4 by 10 foot long used oil release area (Sheer Unit) located at Building 3. Photo taken facing southwest.
41	Michael J. Martin	08/10/2016	8:32 AM	1833	Same image as Photo 40. Photo taken facing east.

42	Michael J. Martin	08/10/2016	8:32 AM	1834	Same image as Photo 40. Photo taken facing east.
43	Michael J. Martin	08/10/2016	8:33 AM	1835	Same image as Photo 34. Photo taken facing south.
44	Michael J. Martin	08/10/2016	8:33 AM	1836	Same image as Photo 34. Photo taken facing south.
45	Michael J. Martin	08/10/2016	8:35 AM	1837	Same image as Photo 34. Photo taken facing southwest.
46	Michael J. Martin	08/10/2016	8:49 AM	1838	Photo of one full 5-gallon pail of used oil (not labeled with the words "Used Oil") located at Building 3. Photo taken facing southwest.
47	Michael J. Martin	08/10/2016	8:55 AM	1839	Photo of one ¼ full 5-gallon pail of used oil (not labeled with the words "Used Oil") located at Building 3. Photo taken facing southwest.
48	Michael J. Martin	08/10/2016	8:57 AM	1840	Photo of open 4-foot long cardboard box storing four 4-foot long fluorescent lamps located at Building 3. Photo taken facing south.
49	Michael J. Martin	08/10/2016	8:55 AM	1841	Same image as Photo 48. Photo taken facing south.
50	Michael J. Martin	08/10/2016	9:05 AM	1842	Photo of one full 12-gallon drum (labeled with the words "Heavy Duty Acid Cleaner"), one ¾ full five gallon pail (non-labeled), and one 5-gallon pail (one cup full and labeled with the words "Dexron III & Marcos ATF") located at Building 3. Photo taken facing southeast.
51	Michael J. Martin	08/10/2016	9:15 AM	1843	Photo of four of fifteen 55-gallon hazardous waste storage drums of crude oil containing solids (labeled with the words "Hazardous Waste," labeled per the DOT, and marked per DOT) located at Hazardous Waste Storage Area 1. Photo taken facing north.
52	Michael J. Martin	08/10/2016	9:15 AM	1844	Same image as Photo 51. Photo taken facing north.

53	Michael J. Martin	08/10/2016	9:35 AM	1845	Photo of one 55-gallon used oil/used oil filters storage drum (severely rusted and dented drum lid) located at Building 1. Photo taken facing southwest.
54	Michael J. Martin	08/10/2016	9:35 AM	1846	Same image as Photo 53. Photo taken facing southwest.
55	Michael J. Martin	08/10/2016	9:36 AM	1847	Photo of one 250-gallon AST of used oil (severely rusted tank body and deep crease in the tank body) located at Building 1. Photo taken facing southwest.
56	Michael J. Martin	08/10/2016	9:37 AM	1848	Same image as Photo 55. Photo taken facing northwest.
57	Michael J. Martin	08/10/2016	9:37 AM	1849	Same image as Photo 55. Photo taken facing southwest.
58	Michael J. Martin	08/10/2016	9:41 AM	1850	Photo of one 20-gallon parts washer unit located at Building 1. Photo taken facing southwest.
59	Michael J. Martin	08/10/2016	9:41 AM	1851	Same image as Photo 58. Photo taken facing southwest.

GBW Railcar Services, LLC
15624 258th Road
Cummings, Kansas 66016
KSD043936277

RCRA CEI Photos

Photos taken by Michael J. Martin
on August 9-10, 2016

GBW Railcar Services, LLC
August 9, 2016

Photo of one ¾ full 55-gallon drum of spent PPE located at the Equipment Boxcar. Photo taken facing southeast.

Photo 1 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo of one full 10-gallon drum of unknown liquid located at the Equipment Boxcar. Photo taken facing west.

Photo 2 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo of fourteen 55-gallon hazardous waste storage drums of crude oil waste containing solids and one 55-gallon drum of waste denatured ethanol/water mixture located at Hazardous Waste Storage Area 1. Photo taken facing northeast.

Photo 3 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo of one ½ full 55-gallon hazardous waste storage drum of crude oil waste containing solids located at Hazardous Waste Storage Area 1. Photo taken facing south.

Photo 4 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo of one 55-gallon hazardous waste storage drum of crude oil waste containing solids (non-labeled and non-dated) located at Hazardous Waste Storage Area 1. Photo taken facing west.

Photo 5 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo of one 55-gallon hazardous waste storage drum of crude oil waste containing solids (drum lid severely dented) located at Hazardous Waste Storage Area 1. Photo taken facing east.

Photo 6 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo of two 55-gallon hazardous waste storage drums of crude oil waste containing solids (non-labeled and non-dated) (yellow arrows) and one 55-gallon drum of waste denatured ethanol/water mixture (green arrow) located at Hazardous Waste Storage Area 1. Photo taken facing east.

Photo 7 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo of one 55-gallon drum of waste denatured ethanol/water mixture (same drum in Photo 7) located at Hazardous Waste Storage Area 1. Photo taken facing southeast.

Photo 8 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Same image as Photo 3. Photo taken facing north.

Photo 9 Michael J. Martin mjm

GBW Railcar Services, LLC
August 9, 2016

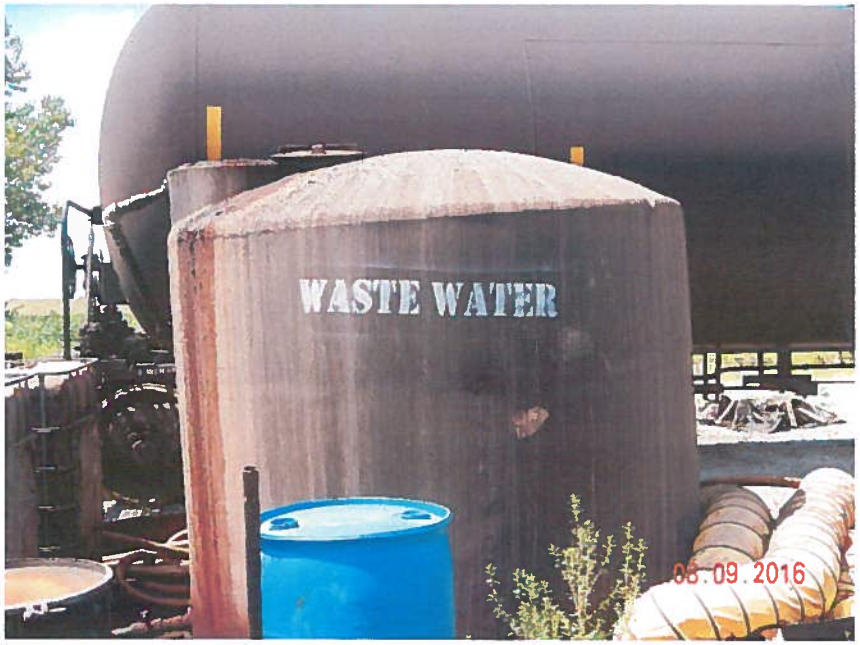
Same image as Photo 3. Photo taken facing north.

Photo 10 Michael J. Martin mjm

GBW Railcar Services, LLC
August 9, 2016

Same image as Photo 8. Photo taken facing north.

Photo 11 Michael J. Martin MJM



GBW Railcar Services, LLC
August 9, 2016

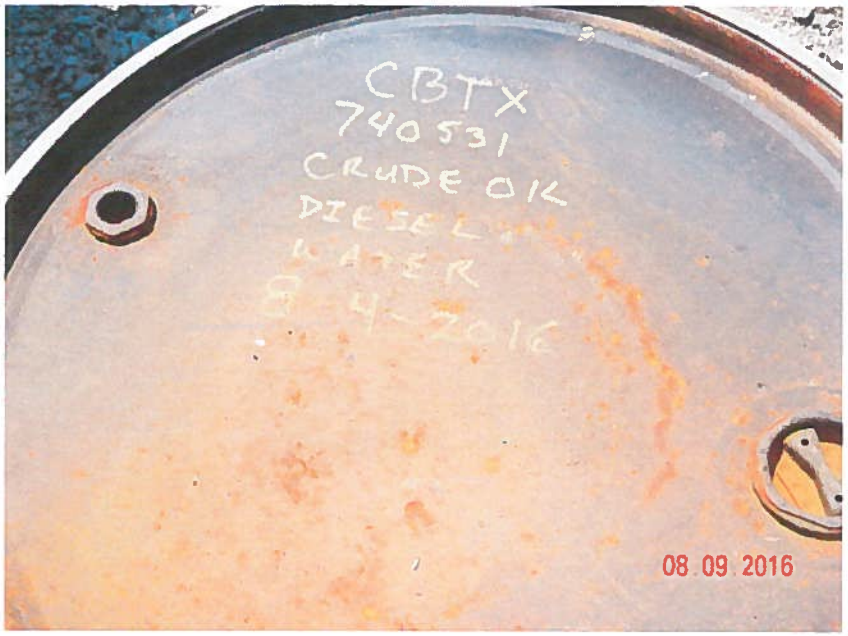
Photo of one 3,500-gallon AST (bulk tank) of non-crude oil wastewater located at the Wastewater Storage Area. Photo taken facing northwest.

Photo 12 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo of one 55-gallon hazardous waste storage drum of crude oil waste containing solids located at Hazardous Waste Storage Area 1. Photo taken facing southwest.

Photo 13 Michael J. Martin MJM



GBW Railcar Services, LLC
August 9, 2016

Same image as Photo 13. Photo taken facing southwest.

Photo 14 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo of one 20-cubic yard roll-off container of spent glass blasting media located at the Spent Blasting Media Storage Area. Photo taken facing north.

Photo 15 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Same image as Photo 15. Photo taken facing north.

Photo 16 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo of one 20-cubic yard roll-off container of spent glass blasting media located at the Spent Blasting Media Storage Area. Photo taken facing southeast.

Photo 17 Michael J. Martin mjm

GBW Railcar Services, LLC
August 9, 2016

Photo of one full 55-gallon drum of kerosene located at the Paint Storage Boxcar. Photo taken facing south.

Photo 18 Michael J. Martin mjm

GBW Railcar Services, LLC
August 9, 2016

Same image as Photo 18. Photo taken facing south.

Photo 19 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo of the Blast Shop baghouse collection unit. Photo taken facing north.

Photo 20 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo one 55-gallon hazardous waste satellite accumulation drum of aerosol puncturing liquid waste (bulging at the top of the drum lid) located at the Paint Shop. Photo taken facing southeast.

Photo 21 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Same image as Photo 21. Photo taken facing north.

Photo 22 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo one 55-gallon hazardous waste satellite accumulation drum of waste paint (not labeled with the words "Hazardous Waste") located at the Paint Shop. Photo taken facing northeast.

Photo 23 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo one 55-gallon hazardous waste satellite accumulation drum of waste paint (labeled with the words "Hazardous Waste") located at the Paint Shop. Photo taken facing northeast.

Photo 24 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo one 55-gallon hazardous waste storage drum of waste paint/solvent mixture (labeled with the words "Hazardous Waste," marked with the 08/09/2016 accumulation start date, and labeled per DOT) located at Hazardous Waste Storage Area 2. Photo taken facing southwest.

Photo 25 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo of one ½ full 5-gallon pail of spent MEK rags located at the Paint Shop. Photo taken facing southeast.

Photo 26 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Same image as Photo 26. Photo taken facing southeast.

Photo 27 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo of one ¾ full 55-gallon drum of waste paint related material located at the Paint Shop. Photo taken facing south.

Photo 28 Michael J. Martin MJM

GBW Railcar Services, LLC
August 9, 2016

Photo of one 20-cubic yard container of scrap metal located at the Scrap Metal Storage Area. Photo taken facing northwest.

Photo 29 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

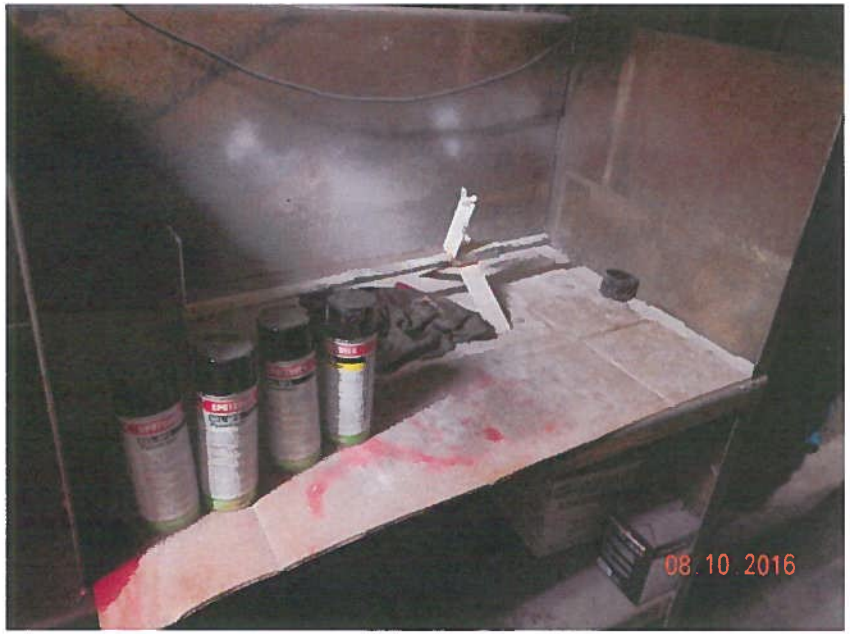
Photo of one blasting unit located at Building 3. Photo taken facing west.

Photo 30 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Photo of the NDT Area located at Building 3. Photo taken facing south.

Photo 31 Michael J. Martin MJM



GBW Railcar Services, LLC
August 10, 2016

Photo of two aerosol cans of SKC-S cleaner, one aerosol can of SKL-WP2 penetrant, and one aerosol can of SKD-S2 developer located in the NDT Area at Building 3. Photo taken facing southwest.

Photo 32 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Photo of one empty 11¼ by 8¾ by 5 inch corrugated cardboard located in the NDT Area at Building 3. Photo taken facing south.

Photo 33 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Photo of one sheer unit and at least 20 yellow absorbent pads (10 by 10 foot long used oil release area) located at Building 3. Photo taken facing northeast.

Photo 34 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Same image as Photo 34. Photo taken facing east.

Photo 35 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Same image as Photo 34. Photo taken facing southeast.

Photo 36 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Same image as Photo 34. Photo taken facing south.

Photo 37 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Same image as Photo 34. Photo taken facing south.

Photo 38 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Same image as Photo 34. Photo taken facing south.

Photo 39 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Photo of one 4 by 10 foot long used oil release area (Sheer Unit) located at Building 3. Photo taken facing southwest.

Photo 40 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Same image as Photo 40. Photo taken facing east.

Photo 41 Michael J. Martin mjm

GBW Railcar Services, LLC
August 10, 2016

Same image as Photo 40. Photo taken facing east.

Photo 42 Michael J. Martin mjm

GBW Railcar Services, LLC
August 10, 2016

Same image as Photo 34. Photo taken facing south.

Photo 43 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Same image as Photo 34. Photo taken facing south.

Photo 44 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Same image as Photo 34. Photo taken facing southwest.

Photo 45 Michael J. Martin

GBW Railcar Services, LLC
August 10, 2016

Photo of one full 5-gallon pail of used oil (not labeled with the words "Used Oil") located at Building 3. Photo taken facing southwest.

Photo 46 Michael J. Martin

GBW Railcar Services, LLC
August 10, 2016

Photo of one ¼ full 5-gallon pail of used oil (not labeled with the words "Used Oil") located at Building 3. Photo taken facing southwest.

Photo 47 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Photo of open 4-foot long cardboard box storing four 4-foot long fluorescent lamps located at Building 3. Photo taken facing south.

Photo 48 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Same image as Photo 48. Photo taken facing south.

Photo 49 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

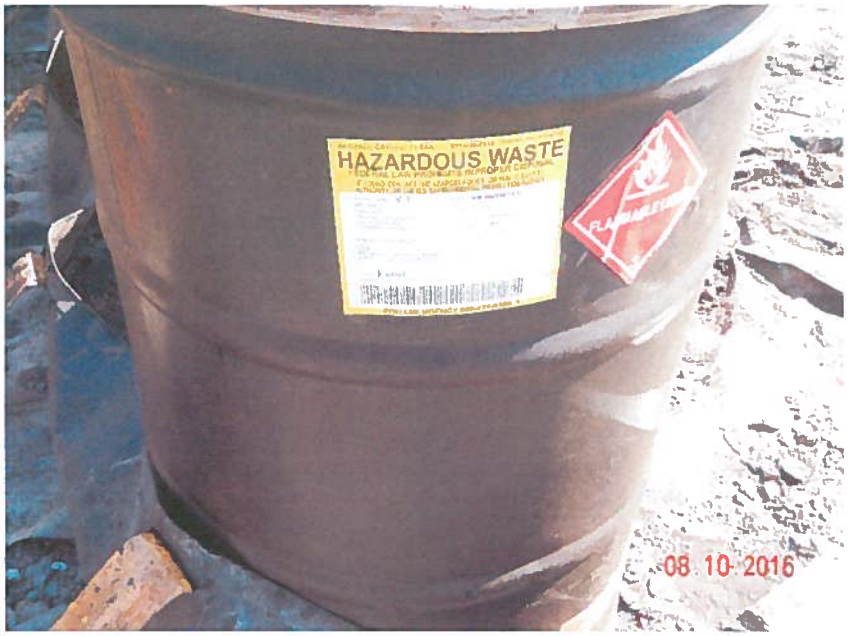
Photo of one full 12-gallon drum (labeled with the words "Heavy Duty Acid Cleaner"), one ¾ full five gallon pail (non-labeled), and one 5-gallon pail (one cup full and labeled with the words "Dexron III & Marcos ATF") located at Building 3. Photo taken facing southeast.

Photo 50 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Photo of four of fifteen 55-gallon hazardous waste storage drums of crude oil containing solids (labeled with the words "Hazardous Waste," labeled per the DOT, and marked per DOT) located at Hazardous Waste Storage Area 1. Photo taken facing north.

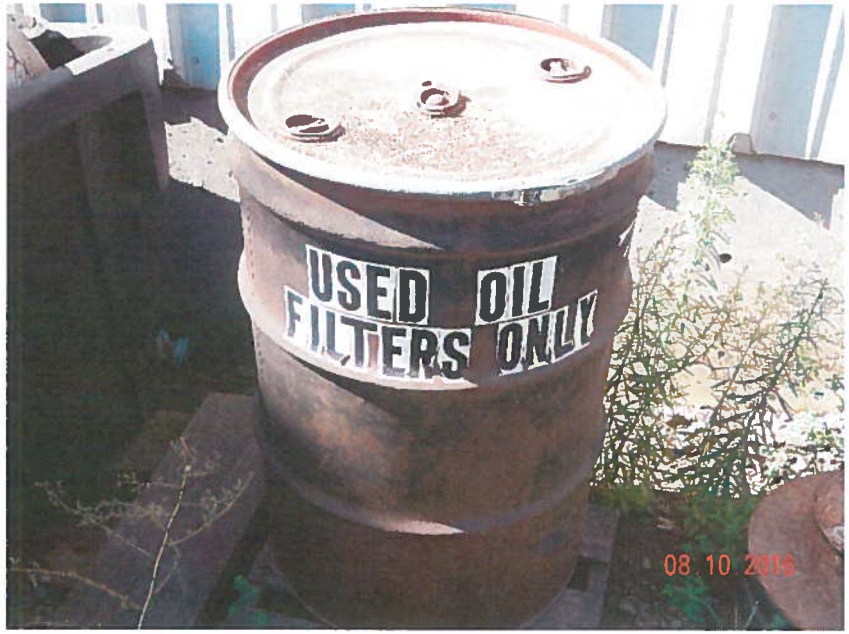
Photo 51 Michael J. Martin MJM



GBW Railcar Services, LLC
August 10, 2016

Same image as Photo 51. Photo taken facing north.

Photo 52 Michael J. Martin MJM



GBW Railcar Services, LLC
August 10, 2016

Photo of one 55-gallon used oil/used oil filters storage drum (severely rusted and dented drum lid) located at Building 1. Photo taken facing southwest.

Photo 53 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Same image as Photo 53. Photo taken facing southwest.

Photo 54 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Photo of one 250-gallon AST of used oil (severely rusted tank body and deep crease in the tank body) located at Building 1. Photo taken facing southwest.

Photo 55 Michael J. Martin mjm

GBW Railcar Services, LLC
August 10, 2016

Same image as Photo 55. Photo taken facing northwest.

Photo 56 Michael J. Martin mjm

GBW Railcar Services, LLC
August 10, 2016

Same image as Photo 55. Photo taken facing southwest.

Photo 57 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Photo of one 20-gallon parts washer unit located at Building 1. Photo taken facing southwest.

Photo 58 Michael J. Martin MJM

GBW Railcar Services, LLC
August 10, 2016

Same image as Photo 58. Photo taken facing southwest.

Photo 59 Michael J. Martin MJM