IOWA DEPARTMENT OF NATURAL RESOURCES

REQUEST FOR SPECIAL WASTE AUTHORIZATION

Check one of the following: ☒ **New Application** ☐ **Renewal, Existing SWA #:** _____

The intent of a special waste authorization is to provide safe and proper management for disposal of wastes which present a threat to human health or the environment or a waste with inherent properties which make the disposal of the waste in a sanitary landfill difficult to manage. It is each landfill's responsibility to inform the waste generator if a waste should be handled as a special waste and to ensure that special wastes delivered to the landfill conform to the Special Waste Acceptance Criteria (SWAC) on file with the Department. It is the Department's responsibility to review each application for a special waste authorization to verify that the proposed waste can be landfilled under the current regulations in Iowa.

READ THE FOLLOWING INSTRUCTIONS BEFORE COMPLETING THIS APPLICATION

Waste Generator:

1. Complete Sections 1-3 of this application applicable to the waste characterization and disposal information.
2. Attach Toxicity Characteristic Leaching Procedure (TCLP) test results, material safety data sheet(s) (MSDS), or evidence of "processor knowledge" when appropriate that demonstrates the waste is not considered a characteristic hazardous waste exhibiting the properties of flammability, corrosivity, reactivity or toxicity or a listed hazardous waste as defined in 40 CFR Part 261, Subpart D.
3. Provide signature in Section 3 to verify that the information provided is true, accurate and complete.
4. Mail or deliver the completed application with attachments to the requested disposal destination (*must be a landfill that is authorized to accept waste from the service area of where the waste was generated*). Please contact Sue Johnson at (515) 217-0872 for a list of landfills authorized to accept waste from the service area in which your facility is located.

Receiving Landfill: Prior review of this application by the receiving landfill allows the department to more quickly process and evaluate the application.

1. Complete Section 5 of this application applicable to the landfill.
2. Indicate by signing the application that the landfill is willing to accept the waste if a Special Waste Authorization is issued by the department and if instructions for disposal of the waste, as contained in the landfill's SWAC, are followed by the generator.
3. Attach SWAC procedures for disposal of the waste.
4. Keep 1 copy for your records and submit the remaining one copy of the completed application with attachments (TCLP, MSDS, SWAC, etc.) to the department at the following address, or email to Susan.Johnson@dnr.iowa.gov:

   Iowa Department of Natural Resources
   Land Quality Bureau- Attn: Susan Johnson
   502 East 9th Street
   Des Moines, IA 50319-0034

Applications will be considered incomplete if not signed by both the waste generator and receiving landfill. The receiving landfill must attach a copy of the SWAC for the particular waste for which the application has been submitted.

Written notification of approval or rejection will be mailed or emailed to the generator and landfill. If approved, a copy of the authorization must accompany the waste hauler to the landfill.

For questions concerning this application contact Sue Johnson at (515) 271-0872 or Susan.Johnson@dnr.iowa.gov.

SECTION 1: WASTE GENERATOR INFORMATION

Name of Primary Contact* Troy M. Jensen Title Environmental Specialist

**SWA approvals will be sent to this person at the address provided below.*

Company Name Cargill

Mailing Address 17540 Monroe/Wapello Rd.

City Eddyville State Iowa Zip Code 52553

Telephone # 641-969-3550 Email Address Troy_Jensen@Cargill.com

Address or location of the point of generation of the waste, if different from the company address:

Address

City State Zip Code

SECTION 2: WASTE CHARACTERIZATION

Waste determined to be hazardous may not be landfilled in Iowa. Attach TCLP analysis that demonstrates the waste is not considered hazardous. For raw or virgin materials being disposed of, a MSDS that indicates the waste is not hazardous may be submitted in lieu of a TCLP analysis.

The generator may also apply knowledge of the hazardous characteristic(s) of the waste in light of the materials or the processes used ("knowledge of process"). In order to use knowledge to characterize the waste, the knowledge that is applied must be valid and verifiable and the generator must be able to demonstrate the basis for their claim by providing supporting information to justify that conclusion.

Name and description of waste. Please address any RCRA listings derived from wastes etc., that may be applicable and why these listings would not pertain to the waste:

Sulfuric acid, Oil dry, and Soda ash

Has any pretreatment been utilized? If so, please describe the pretreatment process:

Applied Soda Ash to bring the PH to an acceptable level.

List the alternatives to disposal that were analyzed and reason not utilized (*attach extra sheets if necessary*):

No other alternatives

Physical state at room temperature? ☒ Solid ☐ Semi-Solid ☐ Liquid

Percent (%) Solid: 100 **pH:** 9.8 **Flashpoint:** _____

Does this waste pass the paint filter liquids test?
Free liquids are prohibited from landfill disposal. Free liquids are defined as the liquid produced when a 100-millimeter or 100-gram representative sample is placed on a standard mesh number 60 (fine mesh size) conical paint filter for five minutes. ☒ Yes ☐ No

Is this waste a listed hazardous waste as identified in 40 CFR 261, Subpart D? Refer to the following web link to find listed hazardous wastes: http://www.gpoaccess.gov/cfr/index.html ☐ Yes ☒ No

Does this waste exhibit the property of *ignitability* as defined in 40 CFR 261, Subpart C? ☐ Yes ☒ No

Does this waste exhibit the property of *corrosivity* as defined in 40 CFR 261, Subpart C? ☐ Yes ☒ No

Does this waste exhibit the property of *reactivity* as defined in 40 CFR 261, Subpart C? ☐ Yes ☒ No

Does this waste exhibit the property of *toxicity* as defined in 40 CFR 261, Subpart C? ☐ Yes ☒ No

SECTION 3: WASTE DISPOSAL INFORMATION

Indicate the proposed disposal location and if this is a request for an ongoing disposal of a special waste or a one-time disposal. If on going, indicate the approximate amount in pounds to be disposed of quarterly.

Landfill Name* Mahaska County Solid Waste

List only a landfill that is authorized to accept waste from the service area of where the waste was generated. Sue Johnson at (515) 217-0872 or susan.johnson@dnr.iowa.gov for a list of landfills authorized to accept waste from your facility.

☐ **Ongoing (or intermittent) with an average disposal rate per quarter of** _____ **pounds**

Indicate the amount on hand to be disposed of immediately: _____ **pounds**

☒ **One time only, with an estimated quantity of** 10,000 **pounds**

SECTION 4: WASTE GENERATOR CERTIFICATION

"I certify under penalty of law (§455B.417.1(c), Code of Iowa) that I have examined and am familiar with the information submitted in this document concerning hazardous waste, and all attachments, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete."

Applicant Signature: Troy M Jensen **Date:** 12-30-2025

Printed Name: Troy M Jensen **Title:** EHS

See Landfill Information on the following page.

SECTION 5: LANDFILL INFORMATION

The following section is to be completed by the receiving landfill. By signing below, the landfill verifies that the application has been examined and if approved by the department, is willing to accept the waste described within, provided that instructions for disposal of the waste, as contained in the landfill's Special Waste Acceptance Criteria, are followed by the generator.

Prior review of this application by the receiving landfill will allow the department to more quickly process and evaluate the application. Please address the following:

Indicate the properties that lead you to believe this is a special waste:

Meets the criteria in the SWAC for non-hazardous spill clean up waste.

Indicate any special handling procedures that the waste generator must follow prior to delivery at the landfill:

Please call ahead.

Name of Responsible Official*: Deb Danley

SWA approvals will be sent to this person at the address given below.

Solid Waste Agency Name Mahaska County Solid Waste Management Commission

Mailing Address 2979 hwy 63

City Oskaloosa **State** Iowa **Zip Code** 52577

Telephone # 641 673 9266 **Email Address** Deb@mahaskacountysolidwaste.org

Responsible Official Signature: [signature] **Date:** 12-30-25

Outlook

SWA for material

From Troy Jensen <Troy_Jensen@cargill.com>
Date Mon 12/29/2025 2:43 PM
To Deb Danley <deb@mahaskacountysolidwaste.org>
Cc Mike Septer <Mike_Septer@cargill.com>

5 attachments (4 MB)
dnr SWA form.doc; Oil dry.pdf; Soda Ash.pdf; Sulfuric Acid SDS.pdf; Sulfuric acid TCLP.pdf;

Hello Deb,

Hope you had a Merry Christmas! I am sending you an SWA for some material we have from a spill of sulfuric acid, our safety team neutralized it with some soda ash and also used some oil dry to absorb it. We ran a TCLP on it and everything came back good. No Hazardous material.

I have attached the SWA form as well as the TCLP results along with the SDS's of all 3 materials that make up the material we are asking to bring.

Please let me know if you need any additional information from me…

Thanks

Troy M. Jensen
Environmental Specialist
Cargill Starches, Sweeteners & Texturizers
direct: (641) 969-3550 mobile (641) 891-9891
17540 Monroe/Wapello Rd. Eddyville,IA 52553

Cargill® Helping the world thrive

SAFETY DATA SHEET

1. Identification

Product identifier SLURRYDRY® P/N 100539 / 100542

Other means of identification Not available.

Recommended use: Not available.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information Manufacturer

		Distributed through:
Company name	CETCO Oilfield Services Company an MTI Company	DITEQ Corporation
Address	2870 Forbs Avenue Hoffman Estates, IL 60192 United States	9876 Pflumm Road Lenexa, KS 66215 United States
Telephone	General Information 800 527-9948	866-688-1032
Website	http://www.cetcooilfieldservices.com/	www.diteq.com
E-mail	safetydata@amcol.com	
Emergency phone number		
Americas	1.866.519.4752 (US, Canada, Mexico) 1 760 476 3962	

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements. None known.

Hazard(s) not otherwise classified (HNOC) Not applicable.

Supplemental information

3. Composition/information on ingredients

Mixtures

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation If symptoms are experienced, remove source of contamination or move victim to fresh air. Get medical attention if symptoms persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops or persists.

Eye contact Flush eyes immediately with large amounts of water. Get medical attention if irritation develops or persists.

Ingestion No need for first aid is anticipated if material is swallowed. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed Treat symptomatically.

General information If you feel unwell, seek medical advice (show the label where possible).

Physical state	Solid.
Form	Solid.
Color	White.
Odor	None.
Odor threshold	Not available.
pH	5.5 - 6.5
Melting point/freezing point	> 390 °F (> 198.89 °C)
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	< 1
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	< 10 mm Hg
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	0.4 - 0.7 g/cm3 0.5 - 0.7 g/cm3
Specific gravity	0.4 - 0.7
VOC (Weight %)	< 0.05 mg/l

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	None known.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	No adverse effects due to inhalation are expected.
Skin contact	Not available.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity	Not available.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
No

SARA 311/312 Hazardous chemical
No

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations
This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US. Massachusetts RTK - Substance List
Not regulated.

US. New Jersey Worker and Community Right-to-Know Act
Not regulated.

US. Rhode Island RTK
Not regulated.

US. California Proposition 65
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date
17-February-2015

Revision date
17-February-2015

Version #
25

Further information
This safety datasheet only contains information relating to safety and does not replace any product information or product specification. HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings
Health: 1
Flammability: 0
Physical hazard: 0

ŞİŞECAM

Soda Ash / Sodium Carbonate
Revision 3 Date: 07/07/2023

SAFETY DATA SHEET

1 PRODUCT AND COMPANY IDENTIFICATION

1.1 PRODUCT IDENTIFIERS

Product Name:	Soda Ash or Sodium Carbonate
Chemical Name:	Sodium Carbonate
Synonyms / Common Names:	Carbonic Acid Sodium Salt
Registration Number REACH:	01-2119485498-19-0019
Product Type REACH:	Substance/mono-constituent
CAS Number:	497-19-8
EC Index Number:	011-005-00-2
EC Number:	207-838-8
RTECS Number:	VZ4050000

1.2 RELEVANT IDENTIFIED USES

Glass Production	Paper Production	Manufacture of Substances
Detergent Component	Laboratory Chemicals	Acidity Regulator

1.3 MANUFACTURER

Şişecam Wyoming LLC
254 County Road 4-6
Green River, Wyoming 82935
United States
Telephone Number: (307) 875-2600

1.4 EMERGENCY TELEPHONE NUMBER

Emergency Response Information Provider: CHEMTREC
Within the United States Emergency Telephone Number: 1-800-424-9300
Outside the United States / International Emergency Telephone Number: +1-703-527-3887

4 FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST-AID MEASURES

General - Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

After inhalation - Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact - Rinse with water. Soap may be used. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.

After eye contact - Rinse immediately with plenty of water for at least 15 minutes. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

After ingestion - Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Consult a doctor/medical service if victim is unwell.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

4.2.1 Acute Symptoms

If inhaled - Dry/sore throat. Coughing. Slight irritation. Exposure to high concentrations: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Respiratory difficulties.

In case of skin contact - Not irritating

In case of eye contact - Inflammation/damage of the eye tissue. Corrosion of the eye tissue. Lacrimation.

If swallowed – After absorption of high quantities: Nausea. Vomiting. Abdominal pain. Irritation of the gastric/intestinal mucosa.

4.2.2 Delayed Symptoms

No effects known.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

No data available.

5 FIRE-FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Upon combustion CO and CO2 are formed. Reacts on exposure to water with some metals. CO2 generation occurs

7.4 INCOMPATIBLE PRODUCTS

Aluminum, powdered aluminum, and acids.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

Contains no substances with occupational exposure limit values.

8.2 EXPOSURE CONTROLS

Appropriate engineering controls – Avoid formation of dust. Keep away from ignition sources. Keep container tightly closed. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.3 PERSONAL PROTECTIVE EQUIPMENT

Eye / Face Protection - Safety glasses with side shields or protective goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection - Handle with gloves, butyl rubber or PVC, which have good resistance. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection – Protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection – For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

8.4 CONTROL OF ENVIRONMENTAL EXPOSURE

Prevent leakage or spillage if safe to do so. Do not let product enter drains. See section 6.2, 6.3, and 13.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance Form:	Crystalline Solid / Crystalline Powder / Grains / Lumps
Color:	Colorless
Odor:	Odorless
Odor Threshold:	No data available
Particle Size:	694 µm
pH:	11.6; 5.0%
Melting Point / Freezing Point:	851°C / 1,564°F

11.1.1 Acute toxicity
LD50 Oral - rat – 2,800 mg/kg
LD50 Dermal – rabbit >2,000 mg/kg
LD50 Inhalation - rat – 2.30 mg/l, 2-hour exposure time, Dust- undetermined

11.1.2 Corrosion/irritation
Skin - rabbit
Result: Mild skin irritation – 24 hours

11.1.3 Serious eye damage/eye irritation
Eyes - rabbit
Result: Severe eye irritation – 24 hours

11.1.4 Respiratory or skin sensitization
Inhalation - no data available
Skin Sensitization: no data available

11.1.5 Germ cell mutagenicity
No data available

11.1.6 Carcinogenicity
IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

11.1.7 Reproductive toxicity
No data available

11.1.8 Specific target organ toxicity - single exposure
No data available

11.1.9 Specific target organ toxicity - repeated exposure
No data available

11.1.10 Chronic effects from short and long-term exposure
On continuous / repeated exposure / contact: Red skin. Dry skin. Tingling / irritation of the skin. Affection of the nasal septum.

12 ECOLOGOCAL INFORMATION

12.1 TOXICITY

	Parameter	Method	Value	Duration	Species	Test Design	Fresh/Salt Water	Value Determination
Acute toxicity fishes	LC50 Other	Other	300 mg/l	96 h	Lepomis macronhirus	Static system	Fresh water	Experimental value
Acute toxicity invertebrates	EC50	Other	200-227 mg/l	48 h	Ceriodaphnia sp.	Semi-static	Fresh water	Experimental value
Toxicity algae and	EC50		242 mg/l	5 days	Algae			Experimental value

15.1 SARA 302 COMPONENTS

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

15.2 SARA 313 COMPONENTS

SARA 313: This material does not contain any chemical with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.3 SARA 311/312 HAZARDS

Acute Health Hazard

15.4 PENNSYLVANIA RIGHT TO KNOW COMPONENTS

Sodium carbonate, CAS-No: 497-19-8

15.5 NEW JERSEY RIGHT TO KNOW COMPONENTS

Sodium carbonate, CAS-No: 497-19-8

15.6 WHMIS CLASSIFICATION: C, D2

Note: The product listed on this SDS has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations.

15.7 US CALIFORNIA SAFE DRINKING WATER & TOXIC ENFORCEMENT ACT (PROPOSITION 65)

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

15.8 INTERNATIONAL INVENTORIES

Component	TSCA (USA)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	IECSC (China)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Sodium Carbonate 497-19-8	X	X	X	X	X	X	X	X

SULPHURIC ACID
SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product Identity: Sulphuric Acid (93 percent).

Trade Names and Synonyms: Oil of vitriol, electrolyte acid, battery acid, matting acid, H_2SO_4.

Manufacturer:
Teck Metals Ltd.
Trail Operations
Trail, British Columbia
V1R 4L8
Emergency Telephone: 250-364-4214

Supplier:
Teck Metals Ltd.
Trail Operations
Trail, British Columbia
V1R 4L8

Preparer:
Teck Metals Ltd.
Suite 3300 – 550 Burrard Street
Vancouver, British Columbia
V6C 0B3

Date of Last Review: December 7, 2018.

Date of Last Edit: December 7, 2018.

Product Use: Used in the manufacture of chlorine dioxide (a pulp and paper bleaching chemical), in the manufacture of phosphate and sulphate fertilizers, in the manufacturing of metal sulphates, as a metal pickling chemical, as a component of lead storage batteries and, where approved, as a vine desiccant (plant growth regulator).

Restrictions on Use: None identified to date.

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION:

Health		Physical	Environmental
Acute Toxicity, (Oral)	– Does not meet criteria	**Corrosive to Metals – Category 1**	**Aquatic Toxicity – Short Term – Category 3**
Acute Toxicity (Inhalation)	**– Category 2**		
Skin Corrosion	**– Category 1**		
Eye Damage	**– Category 1**		
Respiratory or Skin Sensitization	– Does not meet criteria		
Mutagenicity	– Does not meet criteria		
Carcinogenicity	– Does not meet criteria		
Reproductive Toxicity	– Does not meet criteria		
Specific Target Organ Toxicity			
Acute Exposure	**– Category 3**		
Chronic Exposure	**– Category 2**		

as it is available. DO NOT INTERRUPT FLUSHING. If necessary, continue flushing during transport to emergency care facility. Quickly transport victim to an emergency care facility.

Skin Contact: *Symptoms:* Burning, pain, ulceration. Avoid direct contact. Wear chemical protective clothing if necessary. As quickly as possible, remove contaminated clothing, shoes and leather goods (e.g., watchbands, belts), under shower if possible. Flush with lukewarm, gently flowing water for at least 30 minutes. DO NOT INTERRUPT FLUSHING. For acid splashes over large areas of the body transport quickly to an emergency care facility. If necessary, and if it can be done safely, continue flushing during transport to emergency care facility. Completely decontaminate clothing, shoes and leather goods before reuse or discard.

Inhalation: *Symptoms:* Nose throat and lung irritation, coughing, wheezing. Take precautions to ensure your own safety before attempting rescue (e.g., wear appropriate protective equipment, use the buddy system). Remove source of exposure or move person from exposure area to fresh air and keep comfortable for breathing. Call a Poison Centre/doctor or seek medical attention.

Ingestion: *Symptoms:* Burning pain in mouth and throat. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. If vomiting occurs naturally, have person lie on their side in the recovery position. Have victim rinse mouth with water again. Quickly transport victim to an emergency care facility and bring a copy of this SDS.

SECTION 5. FIRE FIGHTING MEASURES

Fire and Explosion Hazards: Sulphuric acid is not flammable or combustible. However, fires may result from the heat generated by contact of concentrated sulphuric acid with combustible materials. Sulphuric acid reacts with most metals, especially when diluted with water, to produce hydrogen gas which can accumulate to explosive concentrations inside confined spaces. It reacts violently with water and organic materials evolving a considerable amount of heat and is very hazardous when in contact with carbides, cyanides, and sulfides.

Extinguishing Media: Use dry chemical or carbon dioxide extinguishers to extinguish small fires in surrounding combustible materials. Use water spray or fog to cool fire-exposed containers of acid and to knock down large fires. Use water streams only if absolutely necessary and DO NOT USE WATER DIRECTLY ON ACID as a violent reaction may occur resulting in spattering of the acid. Do not release runoff from fire control methods to sewers or waterways.

Fire Fighting: Fire fighters must be fully-trained and wear full protective clothing including an approved, self-contained breathing apparatus which supplies a positive air pressure within a full face-piece mask. For fires close to a spill or where vapours are present, use acid-resistant personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Procedures for Cleanup: Control source of release if possible to do so safely. Contain spill, isolate hazard area, and deny entry to unauthorized personnel. Prevent from entering sewage or drainage systems and bodies of water. Dike area around spill and pump uncontaminated acid back to process if possible. Neutralize spilled material with alkali such as sodium carbonate or sodium bicarbonate, soda ash, lime or limestone granules. If neutralized with lime rock or soda ash, good ventilation is required during neutralization because of the release of carbon dioxide gas. Allow to stand for 1-2 hours to complete neutralization, then absorb any liquid in solid absorbent such as vermiculite or clay absorbents. Place spilled material in suitable (corrosion resistant) labeled containers for final disposal. Treat or dispose of waste spilled material and/or contaminated absorbent material in accordance with all local, regional and national regulations.

Personal Precautions: Acid resistant protective clothing and gloves. Sleeves and pant legs should be worn outside, not tucked into gloves and rubber boots. Use close-fitting safety goggles or a combination of safety goggles and a face shield where splashing is a possibility. Respiratory protection equipment should be worn where exposure to hazardous levels of mist or fume is possible.

Environmental Precautions: This product has the potential to pose ecological risks to organisms in both aquatic and terrestrial environments. Discharge of the product to soil and water should be prevented. Prevent spillage from entering sewers or natural watercourses.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling: Keep in tightly closed containers which are appropriately labeled. Do not allow contact with water. Avoid all direct contact with the acid.

Conditions for Safe Storage: Store in a dry, cool, well-ventilated area away from incompatible substances, particularly alkaline materials, cyanides and/or sulphides.

SECTION 11. TOXICOLOGICAL INFORMATION

General: Concentrated sulphuric acid is a direct acting toxicant, producing local effects at the site(s) of contact but no systemic effect. It exerts a strong corrosive action on all tissues due to its severe dehydration action (removing water from tissues). The severity of the chemical burn produced by the concentrated acid is proportional to the strength of the acid and the duration of contact. Burns are deep but typically not severely painful.

Acute:
Skin/Eye: Splashes can cause severe eye burns and may cause irreversible eye injury and possible blindness. Skin contact results in severe burns and may result in permanent scarring. High levels of sulphuric acid mists and aerosols are also irritating to the eyes and skin.

Inhalation: Inhalation may cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath, laryngeal spasm and delayed lung edema. These symptoms may be aggravated by physical exertion. Asthmatics may be more sensitive to inhaling sulphuric acid mists and asthma may be aggravated by exposure to sulphuric acid.

Ingestion: Ingestion is unlikely in industrial use but would result in severe burns to the mouth, throat, esophagus and stomach which could lead to permanent damage to the digestive tract. Small amounts of acid can also enter the lungs during ingestion or subsequent vomiting and cause serious lung injury.

Chronic: Prolonged exposure to dilute solutions or mists may result in eye irritation (chronic conjunctivitis) and produce skin dermatitis. Exposure to high concentrations of acid mist has caused erosion and discolouration of the anterior teeth. Inhalation of sulphuric acid mist may decrease the ability of the respiratory tract to remove other small particles which may be inhaled. Sulphuric acid, per se, is not listed as a carcinogen by OSHA, the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), or the ACGIH. IARC has concluded that there is sufficient evidence that occupational exposure to strong inorganic acid mists containing sulphuric acid is carcinogenic to humans, resulting in an increased incidence of primarily laryngeal cancers. The ACGIH lists strong inorganic acid mists containing sulphuric acid as a suspected human carcinogen (A2) and the NTP have classified strong inorganic acid mists containing sulphuric acid as a known human carcinogen. OSHA does not list sulphuric acid mist as a carcinogen.

Animal Toxicity:

Hazardous Ingredient:	Acute Oral Toxicity:	Acute Dermal Toxicity:	Acute Inhalation Toxicity:
Sulphuric Acid	2140 mg/kg†	Not relevant	0.255 mg/L‡

† LD_{50}, Rat, Oral,

‡ LC_{50}, Rat, Inhalation, 4 hour

SECTION 12. ECOLOGICAL INFORMATION

Sulphuric acid is highly toxic to aquatic organisms and terrestrial plant life; however, it does not bioaccumulate or bioconcentrate through the food chain.

SECTION 13. DISPOSAL CONSIDERATIONS

Do not wash down drain or allow to reach natural watercourses. Dispose of neutralized waste consistent with regulatory requirements. If neutralized with lime rock or soda ash, good ventilation is required during neutralization because of the release of carbon dioxide gas.

SECTION 14. TRANSPORT INFORMATION

PROPER SHIPPING NAME TRANSPORT CANADA..... Sulphuric Acid
PROPER SHIPPING NAME U.S. DOT..... Sulfuric Acid
TRANSPORT CANADA CLASSIFICATION..... Class 8 Packing Group II
U.S. DOT CLASSIFICATION..... Class 8 Packing Group II (RQ) – 1,000 lbs.
PRODUCT IDENTIFICATION NUMBER..... UN1830
MARINE POLLUTANT..... No
IMO CLASSIFICATION..... Class 8

SECTION 15. REGULATORY INFORMATION

U.S.
INGREDIENTS LISTED ON TSCA INVENTORY..... Yes

Clean Harbors Analytical Services
Laboratory Test Report

Report ID

ECL - 2025121608496378

Project: Des Moines, IA SVC: James Harper

Cargill/CA36641

Contact: Des Moines, IA SVC
4704 NE 22nd Street
Des Moines
IA

The laboratory performing the analytical testing is listed below. Samples are tested in "as-received" condition, and the test results relate only to the sample listed above. The laboratory certifies that the generation of all the results contained here-in was performed minimally meeting the quality system of ISO/IEC 17025:2017 and is in compliance with the listed analytical method, except as otherwise noted within this report. This laboratory is NELAP accredited by the state of New York (Laboratory ID #12140).

Page numbers and total number of pages are listed on the bottom of each page. Because each page contains information to the sample in-which any part may be significantly relevant to the other parts of this report; this report shall not be reproduced, except in full, without the written approval of the laboratory's management. Reproduction of this report of any kind, except in full, shall invalidate this report's laboratory approval and all data contained therein.

DATA QUALIFIERS:

Data qualifiers may be utilized when reporting test results as an aid to understanding laboratory method limitations. Data qualifications may be in the form of either a report narrative or/and flagged test results. Data qualifier flag definitions are located on the last page of this report. Holding Time and Preservation recommendation excursions will be narrated within the individual test group or on page 2 of this report.

QUESTIONS AND OPINIONS

Questions regarding this report may be made by contacting the Laboratory Director/Manager or your Project Manager.

Approving Authority: YKumm

December 16, 2025
Lab Supervisor

60ECL@cleanharbors.com

SDG: ECL2025-3025

Sample Summary

ECL256378: Small Sulfuric Acid Spill #3080603

SDG Receipt Report

Sampled Date & Time:	11/21/2025	3:48:00PM	**Sampled By:**	JH
Received Date & Time:	11/26/2025	11:42:00AM	**Received By:**	nelsond455530

Shipping Container Condition:	Good			
Chain of Custody Record Present:	Yes			
COC Complete:	Yes			
Custody Seals Present:	No	*(on sample or on shipping container)*		
Custody Seals Intact:	No			
Sample Container Condition:	Good			
Proper Sample Container:	Yes			
Sample Label Present:	No			
Sample Label Complete and Matches COC:	No			
Sample Received On Ice:	No			
Temperature:	23.2	deg. C	**Thermometer ID:**	0003-56-18
Chemically Preserved:	No	*(documentation review, physical check performed during sample prep if requir*		
Within Holding Time:	Yes			
Sample Receipt Comments:				

Samples are analyzed on an 'as received' basis. Sample conditions upon arrival such as temperatures and headspace may not be optimal. Deviations from optimal sample conditions, as described by the EPA in SW-846, will be communicated to the customer. Any pH testing done at our lab is outside the bounds of optimal testing; within 15 minutes of the sample being taken.

Client ID: Small Sulfuric Acid Spill #3080603

Herbicides TCLP
Test Method: EPA-8151

Lab ID: ECL256378 **SDG:** ECL2025-3025
Sample Matrix: Solid
Batch ID: Herb20251202-920
Prep Method: EPA-8151 **Analysis Date:** 12/11/2025

Parameter	CAS	Qual	Result	LOQ	Test Units	Reg Limits
2,4-D	94-75-7		ND	40.0	ug/L	10 mg/L TCLP
2,4,5-TP (Silvex)	93-72-1		ND	20.0	ug/L	1 mg/L TCLP

SAMPLE QC	CAS	Qual	Recovery	LCL	UCL	Test Units
DCAA	79-43-6		101	14	172	%

**** END OF TEST GROUP ****

Client ID: Small Sulfuric Acid Spill #3080603

Lab ID: ECL256378 **SDG:** ECL2025-3025
Sample Matrix: Solid
Batch ID: Metals20251204-982
Prep Method: EPA-3005A **Analysis Date:** 12/4/2025

Metals ICP-MS TCLP
Test Method: EPA-6020B

Parameter	CAS	Qual	Result	LOQ	Test Units	Reg Limits
Arsenic	7440-38-2		0.423	0.0500	mg/L TCLP	5 mg/L
Barium	7440-39-3		ND	0.200	mg/L TCLP	100 mg/L
Cadmium	14336-64-2		ND	0.0100	mg/L TCLP	1 mg/L
Chromium	14092-98-9		0.223	0.0500	mg/L TCLP	5 mg/L
Lead	7439-92-1		ND	0.0500	mg/L TCLP	5 mg/L
Mercury	7439-97-6		ND	0.200	mg/L TCLP	0.2 mg/L
Selenium	14687-58-2		ND	0.200	mg/L TCLP	1 mg/L
Silver	14378-37-1		ND	0.0500	mg/L TCLP	5 mg/L

**** END OF TEST GROUP ****

Client ID: Small Sulfuric Acid Spill #3080603

Lab ID: ECL256378 **SDG:** ECL2025-3025
Sample Matrix: Solid
Batch ID: pH20251201-1393
Prep Method: **Analysis Date:** 12/1/2025

pH by Meter
Test Method: EPA-9045D

Parameter	CAS	Qual	Result	Test Units	Reg Limits
pH			9.8		<2.0 | >12.5
Temperature			18.1	°C	

**** END OF TEST GROUP ****

Client ID: Small Sulfuric Acid Spill #3080603

Lab ID: ECL256378 **SDG:** ECL2025-3025
Sample Matrix: Solid
Batch ID: Sulfide20251202-1347
Prep Method: **Analysis Date:** 12/2/2025

Sulfide Reactivity Screen
Test Method: ASTM-D4978

Parameter	CAS	Qual	Result	Lower Limit	Upper Limit	Test Units	Reg Limits
Sulfide Reactivity Screen			Neg			Pos/Neg	

**** END OF TEST GROUP ****

Client ID: Small Sulfuric Acid Spill #3080603

Lab ID: ECL256378 **SDG:** ECL2025-3025
Sample Matrix: Solid
Batch ID: VOA20251203-935
Prep Method: EPA-5030C **Analysis Date:** 12/3/2025

Volatiles TCLP
Test Method: EPA-8260D

Parameter	CAS	Qual	Result	LOQ	Test Units	Reg Limits
Benzene	71-43-2		ND	0.0105	mg/L TCLP	0.5 mg/L
Carbon tetrachloride (Perchlorate)	56-23-5		ND	0.0105	mg/L TCLP	0.5 mg/L
Chlorobenzene	108-90-7		ND	0.0105	mg/L TCLP	100 mg/L
Chloroform	67-66-3		ND	0.0105	mg/L TCLP	6 mg/L
1,4-Dichlorobenzene	106-46-7		ND	0.0105	mg/L TCLP	7.5 mg/L
1,2-Dichloroethane	107-06-2		ND	0.0105	mg/L TCLP	0.5 mg/L
1,1-Dichloroethylene	75-35-4		ND	0.0105	mg/L TCLP	0.7 mg/L
2-Butanone (MEK)	78-93-3		ND	0.0420	mg/L TCLP	200 mg/L
Tetrachloroethylene (PERC)	127-18-4		ND	0.0105	mg/L TCLP	0.7 mg/L
Trichloroethylene	79-01-6		ND	0.0105	mg/L TCLP	0.5 mg/L
Vinyl chloride	75-01-4		ND	0.00420	mg/L TCLP	0.2 mg/L

SAMPLE QC	CAS	Qual	Recovery	LCL	UCL	Test Units
Toluene-d8	2037-26-5		100	80	120	%
4-Bromofluorobenzene	460-00-4		105	80	127	%
Dibromofluoromethane	1868-53-7		102	80	120	%

**** END OF TEST GROUP ****

SAMPLE CHAIN-OF-CUSTODY RECORD

2025 -3025 3025
SDG

Ship Samples To:
Clean Harbors East Corporate Lab
1910 Russell Street
Baltimore, MD 21203
Attn: Sample Receiving
Phone: 410-244-8200

ECL25 6378
2025 -3025
Small Sulfuric Acid Spill #3080603

Client Name	Cargill /CA36641	**Sales Specialist Name**	James Harper	**Branch Name / Number**	Des Moines/77DSS
Client Contact	Dustin Walker	**Sales Specialist Phone**	515-419-5830	**Sales Email**	james.harper@safety-kleen.com
Client Email	dustin.walker@safety-kleen.com	**Branch Address**	4704 NE 22nd ST Des Moines, IA 50313		

COLLECTION INFORMATION

CHAS Assigned SAMPLE ID #	CLIENT SAMPLE IDENTIFICATION	DATE	TIME	DESCRIPTION OF SAMPLE	NO. OF CONTAINERS & SIZE	SIGNATURE OF COLLECTOR
3080603	Small sulfuric acid spill	11-21-25	3:48pm	sulfuric acid spill	2	

ANALYSIS REQUEST (PLACE CHECKS BY TESTS REQUIRED)

- [X] **Full TCLP + Characteristics (D001 - D043)** (SPN 82109, 870813, 870812, 870814, 870815)
- [ ] **Full TCLP (D004 - D043)** (SPN 82109)
- [ ] **Full TCLP Minus Pests & Herbs** (SPN 870805, 870807, 870808)
- [ ] **Flashpoint / Ignitabilty for D001** (SPN 870813)
- [ ] **pH / Corrosivity for D002** (SPN 870812)
- [ ] **Reactivity Screen (Cyanide/Sulfide) D003** (SPN 870814, SPN 870815)
- [ ] **TCLP Metals Only** (SPN 870805)
- [ ] **TCLP Volatiles Only** (SPN 870807)
- [ ] **TCLP Semivoa Only - Aqueous or Solid** (SPN 870808)
- [ ] **TCLP Semivoa Only - Organics** (SPN 870809)
- [ ] **Solvent Screen** (SPN 870813, 870806, 870807) (Includes Flashpoint, TCLP Metals & TCLP Volatiles)
- [ ] **TCLP Pesticides** (SPN 870810)
- [ ] **TCLP Herbicides** (SPN 870811)
- [ ] **PCBs (including wipes)** (SPN 870820)
- [ ] **BTEX** (SPN 870819)
- [ ] **Heat of Combustion (BTU)** (SPN 870822)
- [ ] **% Water by Karl Fischer** (SPN 870823)
- [ ] **Total Organic Carbon (TOC)** (SPN 870824)
- [ ] **Oil and Grease (HEM)** (SPN 870816)
- [ ] **Total Petroleum Hydrocarbons (TPH)** (SPN 870817)
- [ ] **Total Halogens (TX)** (SPN 870825)
- [ ] **Gasoline Range Organics (GRO)** (SPN 870828)
- [ ] **Diesel Range Organics (DRO)** (SPN 870829)
- [ ] **Biochemical Oxygen Demand (BOD)** (SPN 870826)
- [ ] **Chemical Oxygen Demand (COD)** (SPN 870827)
- [ ] **Specific Gravity/Bulk Density** (SPN 870818)

ADDITIONAL TESTING REQUESTS:

SAMPLE TRANSFER RECORD

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
James Harper	11-21-25	3:53 pm			

Received By: nelsond455530
Received: 2025-11 26
Datetime: 11 42
Temp: 23.2
2025 -3025 1 Samples

LAB USE ONLY

TEMPERATURE WHEN RECEIVED_____°C

SAMPLE KIT OPENED AND CHECKED IN BY_____AT____:____ON____/____/____.

Clean Harbors Analytical Services
Laboratory Test Report

Report ID

ECL - 2025121608496378

Project: Des Moines, IA SVC: James Harper

Cargill/CA36641

Contact: Des Moines, IA SVC
4704 NE 22nd Street
Des Moines
IA

The laboratory performing the analytical testing is listed below. Samples are tested in "as-received" condition, and the test results relate only to the sample listed above. The laboratory certifies that the generation of all the results contained here-in was performed minimally meeting the quality system of ISO/IEC 17025:2017 and is in compliance with the listed analytical method, except as otherwise noted within this report. This laboratory is NELAP accredited by the state of New York (Laboratory ID #12140).

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QUESTIONS AND OPINIONS
Questions regarding this report may be made by contacting the Laboratory Director/Manager or your Project Manager.

Approving Authority: YKumm
December 16, 2025
Lab Supervisor

60ECL@cleanharbors.com

TABLE OF CONTENTS

SDG: ECL2025-3025

Sample Summary

ECL256378: Small Sulfuric Acid Spill #3080603

SDG Receipt Report

Sampled Date & Time:	11/21/2025	3:48:00PM	**Sampled By:**	JH
Received Date & Time:	11/26/2025	11:42:00AM	**Received By:**	nelsond455530

Shipping Container Condition:	Good			
Chain of Custody Record Present:	Yes			
COC Complete:	Yes			
Custody Seals Present:	No	*(on sample or on shipping container)*		
Custody Seals Intact:	No			
Sample Container Condition:	Good			
Proper Sample Container:	Yes			
Sample Label Present:	No			
Sample Label Complete and Matches COC:	No			
Sample Received On Ice:	No			
Temperature:	23.2	deg. C	**Thermometer ID:**	0003-56-18
Chemically Preserved:	No	*(documentation review, physical check performed during sample prep if requir*		
Within Holding Time:	Yes			
Sample Receipt Comments:				

Samples are analyzed on an 'as received' basis. Sample conditions upon arrival such as temperatures and headspace may not be optimal. Deviations from optimal sample conditions, as described by the EPA in SW-846, will be communicated to the customer. Any pH testing done at our lab is outside the bounds of optimal testing; within 15 minutes of the sample being taken.

Client ID: Small Sulfuric Acid Spill #3080603 **Lab ID:** ECL256378 **SDG:** ECL2025-3025
Sample Matrix: Solid

Sample Case Narrative

With any exceptions noted as flags and/or narratives detailed below on this page, standard analytical protocols were followed in the preparation and analysis and no problems related to the reported end test results were encountered or anomalies observed. The sample was analyzed with the intent to achieve a lower limit of Limit of Quantitation (LOQ) sufficient to meet the needs of the intended purpose of the test as understood by the laboratory. In some cases, either due to matrix interference or analytes present at high concentrations, samples may be diluted. For diluted samples or for samples that were received with insufficient amount, the reporting limits (RL) and LOQ are adjusted relative to the dilution volume.

All EPA recommended holding times specified in SW-846 Chapters 3 and 4 were met unless otherwise detailed in the individual sections below.

SAMPLE RECEIPT
The laboratory reports test results in as-received condition. The condition of this sample at time of receipt is detailed in the Sample Receipt Report located on page 2 of this report.

SAMPLE ANALYSIS
As related to the final reported values in this test report, all method and laboratory established quality control criteria were met except as detailed below. If no anomalies are listed it can be assumed that all quality control criteria related to the values presented were in control.

The laboratory establishes limits for sample quality control checks (matrix spike and surrogates) from the laboratory's control samples (LCSs) which utilize a clean control matrix. This allows the user to assess differences between analyte precision and bias in their sample against limits established from a known laboratory control.

EPA-8081

OCER251829 Analysis performed by ALS. PA lab ID#22-293.

EPA-8151

OCER251830 Analysis performed by ALS. PA lab ID#22-293.

OCER251844 Analysis performed by ALS. PA lab ID#22-293.

EPA-1311

Toxicity Characteristic Leaching Procedure Performed on 12/10/2025

Clean Harbors Analytical Services
Laboratory Test Report

Client ID: Small Sulfuric Acid Spill #3080603
Lab ID: ECL256378 **SDG:** ECL2025-3025
Sample Matrix: Solid
Herbicides TCLP
Batch ID: Herb20251202-920
Test Method: EPA-8151
Prep Method: EPA-8151 **Analysis Date:** 12/11/2025

Parameter	CAS	Qual	Result	LOQ	Test Units	Reg Limits
2,4-D	94-75-7		ND	40.0	ug/L	10 mg/L TCLP
2,4,5-TP (Silvex)	93-72-1		ND	20.0	ug/L	1 mg/L TCLP

SAMPLE QC	CAS	Qual	Recovery	LCL	UCL	Test Units
DCAA	79-43-6		101	14	172	%

**** END OF TEST GROUP ****

Clean Harbors Analytical Services
Laboratory Test Report

Client ID: Small Sulfuric Acid Spill #3080603
Lab ID: ECL256378 **SDG:** ECL2025-3025
Sample Matrix: Solid
Batch ID: Flash20251203-575
Prep Method: **Analysis Date:** 12/3/2025

Flashpoint by Ignitability of Solids
Test Method: EPA-1030

Parameter	Ignitability	Burn Rate	Test Units	Reg Limits
Ignitability of Solid	Not Ignitable	N/A	mm/sec	2.2 mm/sec

**** END OF TEST GROUP ****

Clean Harbors Analytical Services
Laboratory Test Report

Client ID: Small Sulfuric Acid Spill #3080603
Lab ID: ECL256378 **SDG:** ECL2025-3025
Sample Matrix: Solid

Metals ICP-MS TCLP
Test Method: EPA-6020B
Batch ID: Metals20251204-982
Prep Method: EPA-3005A **Analysis Date:** 12/4/2025

Parameter	CAS	Qual	Result	LOQ	Test Units	Reg Limits
Arsenic	7440-38-2		0.423	0.0500	mg/L TCLP	5 mg/L
Barium	7440-39-3		ND	0.200	mg/L TCLP	100 mg/L
Cadmium	14336-64-2		ND	0.0100	mg/L TCLP	1 mg/L
Chromium	14092-98-9		0.223	0.0500	mg/L TCLP	5 mg/L
Lead	7439-92-1		ND	0.0500	mg/L TCLP	5 mg/L
Mercury	7439-97-6		ND	0.200	mg/L TCLP	0.2 mg/L
Selenium	14687-58-2		ND	0.200	mg/L TCLP	1 mg/L
Silver	14378-37-1		ND	0.0500	mg/L TCLP	5 mg/L

**** END OF TEST GROUP ****

Clean Harbors Analytical Services
Laboratory Test Report

Client ID: Small Sulfuric Acid Spill #3080603
Lab ID: ECL256378 **SDG:** ECL2025-3025
Sample Matrix: Solid
Pesticides TCLP
Batch ID: Pest20251202-915
Test Method: EPA-8081
Prep Method: EPA-3511 **Analysis Date:** 12/10/2025

Parameter	CAS	Qual	Result	LOQ	Test Units	Reg Limits
Chlordane	57-74-9		ND	10.0	ug/L	0.03 mg/L TCLP
Endrin	56-23-5		ND	0.400	ug/L	0.02 mg/L TCLP
Heptachlor (and its epoxide)	76-44-8		ND	0.400	ug/L	0.008 mg/L TCLP
Lindane	58-89-9		ND	0.400	ug/L	0.4 mg/L TCLP
Methoxychlor	72-43-5		ND	0.400	ug/L	10 mg/L TCLP
Toxaphene	8001-35-2		ND	20.0	ug/L	0.5 mg/L TCLP

SAMPLE QC	CAS	Qual	Recovery	LCL	UCL	Test Units
Decachlorobiphenyl	2051-24-3		78	30	140	%
Tetrachloro-m-xylene	877-09-8		66	30	123	%

**** END OF TEST GROUP ****

Clean Harbors Analytical Services
Laboratory Test Report

Client ID: Small Sulfuric Acid Spill #3080603
Lab ID: ECL256378 **SDG:** ECL2025-3025
Sample Matrix: Solid
pH by Meter
Batch ID: pH20251201-1393
Test Method: EPA-9045D
Prep Method: **Analysis Date:** 12/1/2025

Parameter	CAS	Qual	Result	Test Units	Reg Limits
pH			9.8		<2.0 | >12.5
Temperature			18.1	°C	

**** END OF TEST GROUP ****

Clean Harbors Analytical Services
Laboratory Test Report

Client ID: Small Sulfuric Acid Spill #3080603
Lab ID: ECL256378 **SDG:** ECL2025-3025
Sample Matrix: Solid

Cyanide Reactivity Screen
Test Method: ASTM-D5049
Batch ID: Cyanide20251202-1346
Prep Method: **Analysis Date:** 12/2/2025

Parameter	CAS	Qual	Result	Lower Limit	Upper Limit	Test Units	Reg Limits
Cyanide Reactivity Screen			Neg			Pos/Neg	

**** END OF TEST GROUP ****

Clean Harbors Analytical Services
Laboratory Test Report

Client ID: Small Sulfuric Acid Spill #3080603
Lab ID: ECL256378 **SDG:** ECL2025-3025
Sample Matrix: Solid
Sulfide Reactivity Screen
Batch ID: Sulfide20251202-1347
Test Method: ASTM-D4978
Prep Method: **Analysis Date:** 12/2/2025

Parameter	CAS	Qual	Result	Lower Limit	Upper Limit	Test Units	Reg Limits
Sulfide Reactivity Screen			Neg			Pos/Neg	

**** END OF TEST GROUP ****

Client ID: Small Sulfuric Acid Spill #3080603 **Lab ID:** ECL256378 **SDG:** ECL2025-3025
Sample Matrix: Solid
Semivolatiles & 1,4-Dichlorobenzene TCLP **Batch ID:** DRO20251205-615
Test Method: EPA-8270E **Prep Method:** EPA-3510C **Analysis Date:** 12/5/2025

Parameter	CAS	Qual	Result	LOQ	Test Units	Reg Limits
1,4-Dichlorobenzene	106-46-7		ND	0.130	mg/L TCLP	7.5 mg/L
2,4-Dinitrotoluene	121-14-2		ND	0.130	mg/L TCLP	0.13 mg/L
Hexachlorobenzene	118-74-1		ND	0.130	mg/L TCLP	0.13 mg/L
Hexachlorobutadiene	87-68-3		ND	0.130	mg/L TCLP	0.5 mg/L
Hexachloroethane	67-72-1		ND	0.130	mg/L TCLP	3 mg/L
2-Methylphenol (o-Cresol)	95-48-7		ND	0.130	mg/L TCLP	200 mg/L
3/4-Methylphenol (m/p-Cresol)	108-39-4/106-44-5		ND	0.130	mg/L TCLP	200 mg/L
Total Cresols	1319-77-3		ND	0.130	mg/L TCLP	200 mg/L
Nitrobenzene	98-95-3		ND	0.130	mg/L TCLP	2 mg/L
Pentachlorophenol	87-86-5		ND	0.130	mg/L TCLP	100 mg/L
Pyridine	110-86-1		ND	0.130	mg/L TCLP	5 mg/L
2,4,6-Trichlorophenol	88-06-2		ND	0.130	mg/L TCLP	2 mg/L
2,4,5-Trichlorophenol	95-95-4		ND	0.130	mg/L TCLP	400 mg/L

SAMPLE QC	CAS	Qual	Recovery	LCL	UCL	Test Units
2-Fluorobiphenyl	321-60-8		46	10	158	%
2-Fluorophenol	367-12-4		26	10	122	%
Nitrobenzene-d5	4165-60-0		49	10	122	%
Phenol-d6	13127-88-3		18	10	112	%
p-Terphenyl-d14	1718-51-0		17	10	152	%
2,4,6-Tribromophenol	118-79-6		76	10	168	%

**** END OF TEST GROUP ****

Clean Harbors Analytical Services
Laboratory Test Report

Client ID: Small Sulfuric Acid Spill #3080603 **Lab ID:** ECL256378 **SDG:** ECL2025-3025
Sample Matrix: Solid
Volatiles TCLP **Batch ID:** VOA20251203-935
Test Method: EPA-8260D **Prep Method:** EPA-5030C **Analysis Date:** 12/3/2025

Parameter	CAS	Qual	Result	LOQ	Test Units	Reg Limits
Benzene	71-43-2		ND	0.0105	mg/L TCLP	0.5 mg/L
Carbon tetrachloride (Perchlorate)	56-23-5		ND	0.0105	mg/L TCLP	0.5 mg/L
Chlorobenzene	108-90-7		ND	0.0105	mg/L TCLP	100 mg/L
Chloroform	67-66-3		ND	0.0105	mg/L TCLP	6 mg/L
1,4-Dichlorobenzene	106-46-7		ND	0.0105	mg/L TCLP	7.5 mg/L
1,2-Dichloroethane	107-06-2		ND	0.0105	mg/L TCLP	0.5 mg/L
1,1-Dichloroethylene	75-35-4		ND	0.0105	mg/L TCLP	0.7 mg/L
2-Butanone (MEK)	78-93-3		ND	0.0420	mg/L TCLP	200 mg/L
Tetrachloroethylene (PERC)	127-18-4		ND	0.0105	mg/L TCLP	0.7 mg/L
Trichloroethylene	79-01-6		ND	0.0105	mg/L TCLP	0.5 mg/L
Vinyl chloride	75-01-4		ND	0.00420	mg/L TCLP	0.2 mg/L

SAMPLE QC	CAS	Qual	Recovery	LCL	UCL	Test Units
Toluene-d8	2037-26-5		100	80	120	%
4-Bromofluorobenzene	460-00-4		105	80	127	%
Dibromofluoromethane	1868-53-7		102	80	120	%

**** END OF TEST GROUP ****

REPORTING LIMITS AND ACRONYMS

MDL Method Detection Limit - The minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results.

LOQ Limit of Quantitation - The lowest verified point that a value can be reported that is within a known level of confidence, adjusted for sample digestate/extract dilution.

DF Dilution Factor - The ratio of the volume or weight of the original sample to the volume or weight of the final solution after addition of diluent. Results, MDLs and LOQs are calculated after the dilution factor is applied.

%R Percent Recovery - The proportion of measured analyte concentration to the known spiked concentration, after subtracting the original amount found in the sample if it is a matrix spike.

REPORTING FLAGS

B Denotes a sample test result analyte that is at or above the LOQ was also found in the associated laboratory Method Blank..

T Denotes that the reported analyte that is at or above the LOQ was only tentatively identified and not confirmed where the test method requires such confirmation be performed. This code is present because some data clients do not require the laboratory to perform the confirmation in order for the test result to be usable.

ND or < Analyte was not detected at or above the LOQ, or MDL, if applicable.

> Analyte was greater than the reported value.

S Surrogate Outside of Control Limits - Denotes that the surrogate recovery is outside of control limits due to sample matrix.

I Internal Standard Outside of Control Limits - Denotes that the internal standard response is outside of control limits due to sample matrix.

J Estimated Value - Denotes that the reported analyte is above the MDL and below the LOQ, and has an increased level of potential bias.

E Estimated Value - Denotes that a positive numeric value is an estimated value. Used when the reported value is greater than the highest instrument calibration point in the curve or above the instrument's verified upper linear dynamic range.

UJ MDL and LOQ Estimated - Denotes the RL and LOQ has an increased level of potential bias. Used in non-detect values as necessary.

NR Not Run - Denotes that the listed analyte was not run or was not reported.

[a-z][0-9] Lowercase Letter with Number - See comment in case narrative section.

SURROGATE LIMIT GENERATION

It is important to note that when surrogates are used as part of the test method, statistical control limits (when employed) are derived from the LCS results in an appropriate QC matrix (typically ottawa sand for solid matrix samples, reagent water for aqueous matrix samples, TCLP solution for TCLP extracts, and mineral oil for non-aqueous liquid concentrated waste samples). These limits therefore are representative of the process by which MDL and LOQ values are established and verified. This allows the data user to assess matrix effects related to surrogate recovery against a known laboratory control.

EPA-6020B Mercury (Hg) not Accredited by NY ELAP.

**** END OF TEST REPORT ****

SAMPLE CHAIN-OF-CUSTODY RECORD

2025 3025
2025 -3025
SDG

Ship Samples To:
Clean Harbors East Corporate Lab
1910 Russell Street
Baltimore, MD 21203
Attn: Sample Receiving
Phone: 410-244-8200

ECL25 6378
2025 -3025
Small Sulfuric Acid Spill #3080603

Client Name	Cargill /CA36641	**Sales Specialist Name**	James Harper	**Branch Name / Number**	Des Moines/77DSS
Client Contact	Dustin Walker	**Sales Specialist Phone**	515-419-5830	**Sales Email**	james.harper@safety-kleen.com
Client Email	dustin.walker@safety-kleen.com	**Branch Address**	4704 NE 22nd ST Des Moines, IA 50313		

COLLECTION INFORMATION

CHAS Assigned SAMPLE ID #	CLIENT SAMPLE IDENTIFICATION	DATE	TIME	DESCRIPTION OF SAMPLE	NO. OF CONTAINERS & SIZE	SIGNATURE OF COLLECTOR
3080603	Small sulfuric acid spill	11-21-25	3:48pm	sulfuric acid spill	2	

ANALYSIS REQUEST (PLACE CHECKS BY TESTS REQUIRED)

- [X] **Full TCLP + Characteristics (D001 - D043)** (SPN 82109, 870813, 870812, 870814, 870815)
- [ ] **Full TCLP (D004 - D043)** (SPN 82109)
- [ ] **Full TCLP Minus Pests & Herbs** (SPN 870805, 870807, 870808)
- [ ] **Flashpoint / Ignitabilty for D001** (SPN 870813)
- [ ] **pH / Corrosivity for D002** (SPN 870812)
- [ ] **Reactivity Screen (Cyanide/Sulfide) D003** (SPN 870814, SPN 870815)
- [ ] **TCLP Metals Only** (SPN 870805)
- [ ] **TCLP Volatiles Only** (SPN 870807)
- [ ] **TCLP Semivoa Only - Aqueous or Solid** (SPN 870808)
- [ ] **TCLP Semivoa Only - Organics** (SPN 870809)
- [ ] **Solvent Screen** (SPN 870813, 870806, 870807) **(Includes Flashpoint, TCLP Metals & TCLP Volatiles)**
- [ ] **TCLP Pesticides** (SPN 870810)
- [ ] **TCLP Herbicides** (SPN 870811)
- [ ] **PCBs (including wipes)** (SPN 870820)
- [ ] **BTEX** (SPN 870819)
- [ ] **Heat of Combustion (BTU)** (SPN 870822)
- [ ] **% Water by Karl Fischer** (SPN 870823)
- [ ] **Total Organic Carbon (TOC)** (SPN 870824)
- [ ] **Oil and Grease (HEM)** (SPN 870816)
- [ ] **Total Petroleum Hydrocarbons (TPH)** (SPN 870817)
- [ ] **Total Halogens (TX)** (SPN 870825)
- [ ] **Gasoline Range Organics (GRO)** (SPN 870828)
- [ ] **Diesel Range Organics (DRO)** (SPN 870829)
- [ ] **Biochemical Oxygen Demand (BOD)** (SPN 870826)
- [ ] **Chemical Oxygen Demand (COD)** (SPN 870827)
- [ ] **Specific Gravity/Bulk Density** (SPN 870818)

ADDITIONAL TESTING REQUESTS:

SAMPLE TRANSFER RECORD

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
James Harper	11-21-25	3:53 pm			

Received By: nelsond455530
Received: 2025-11 26
Datetime: 11.42
Temp: 23.2
2025 -3025 1 Samples

LAB USE ONLY

TEMPERATURE WHEN RECEIVED_____°C

SAMPLE KIT OPENED AND CHECKED IN BY_____AT_____:_____ON____/____/____.

Special Waste Acceptance Criteria

Mahaska County **62-SDP-01--74**

Joe Farris
Mahaska County Solid Waste Management Commission
2979 Highway 63
Oskaloosa, IA 52577
641-673-9266

Send completed form to:
Special Waste Program Planner
Solid Waste Planning and Permitting Section
502 East Ninth Street
Des Moines, Iowa 50319-0034

SPECIAL WASTE CURRENTLY ACCEPTED. Please provide information regarding special waste this facility is currently accepting for final disposal. Provide details for requirements for accepting and off-loading each special waste.
NOTE: Completion of this form requires reference to Iowa Administrative Code 567-109. Please type or print in ink.

SWA Number	SWA Acceptance and Management Description
	DRY PAINT FILTERS & PAINT RELATED WASTES Includes overspray filters, solvent rags, and paint booth debris. Criteria- Must be dry and free of liquids. Must pass: 1. Paint filter liquids test. 2. TCLP for metals and solvents. 3. SDS documentation for all paint products used. Packaging- Double bagged in 6 mil poly bags or in sealed drums. Handling- Approved SWA must be presented. Attendant directs the hauler to the working face. Disposal- Direct placement on the working face, covered with refuse or daily soil.
	NON-HAZARDOUS SPILL CLEANUP WASTE Includes absorbent pads, dry soil, and other solid materials used in spill response. Criteria- Must be non-hazardous and free of liquids. Must pass: 1. Paint filter liquids test. 2. TCLP analysis if applicable. 3. SDS or generator process knowledge to verify non-hazardous status. Packaging-Contained in sealed drums or in 6 mil poly bags. Handling- Approved SWA must be presented. Attendant directs the hauler to the working face. Disposal- Direct placement on the working face, covered with refuse or daily soil.

Questions? Call or email:
Sue Johnson, Environmental Specialist, susan.johnson@dnr.state.ia.us (515) 281-7982
Becky Jolly, Statistical Research Analyst, becky.jolly@dnr.state.ia.us (515) 281-8308