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 (2) copies of 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) 725-8317 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:

   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 faxed 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) 725-8317 or susan.johnson@dnr.iowa.gov

SECTION 1: WASTE GENERATOR INFORMATION

Name of Primary Contact* Mark Webster **Title** Sr Environmental Scientist

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

Company Name Enterprise Products

Mailing Address 1100 Louisiana

City Houston **State** TX **Zip Code** 77002

Telephone # 817-304-2564 **Fax #** environmental@eprod.com

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

Address 3220 Silver Ave

City Sanborn **State** Iowa **Zip Code** 51248

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:

Used sandblasting grit commercially known as Clean Bite Coarse which is essentially recycled glass.
https://cleanbiteglass.com/product/clean-bite-coarse/
Analytical attached

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

No

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

It is non-hazardous sand

Physical state at room temperature?	Percent (%) Solid:	pH:	Flashpoint:
☒ Solid ☐ Semi-Solid ☐ Liquid	100	NA	NA

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**

SECTION 2: WASTE CHARACTERIZATION (Continued)

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 on going 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* Northwest Iowa Landfill, Sheldon, IA

List only a landfill that is authorized to accept waste from the service area of where the waste was generated. Sue Johnson at (515) 725-8317 or susan.johnson@dnr.iowa.gov for a list of landfills authorized to accept waste from your facility.

☐ **On going (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** 4000 **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: _____ **Date:** 11/13/2025

Printed Name: Mark Webster **Title:** Sr. Environmental Scientist

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:

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

Name of Responsible Official*: _____

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

Solid Waste Agency Name _____

Mailing Address _____

City _____ **State** _____ **Zip Code** _____

Telephone # _____ **Fax #** _____

Responsible Official Signature: _____ **Date:** _____

NC MINERALS

ncminerals.biz

SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product Identifier: Crushed Glass

Synonyms: Crushed Glass, Abrasive Blast media

Product Name: Clean Bite, R14-T, R18-F, Coarse, Medium, Fine, R21-T, R28-F, R100

Recommended Use: Material is a granular material for use as an abrasive blasting media and various other industrial applications. This product is amorphous and contains no free crystalline silica.

Restrictions on Use: None

Manufacturer

NC Minerals, LLC

7901 Xerxes Ave. S. #307
Bloomington, MN 55431

ncminerals.biz

(952) 212-6541

SECTION 2 - HAZARD IDENTIFICATION

CLASSIFICATION OF SUBSTANCE OR MIXTURE

This mixture as produced has not been assessed and/or tested for its physical, health, and environmental hazards, but hazards are inferred through similarity to other alumino-silicates and calcium carbonate mineralogical materials of similar composition. Analogous mixtures do not meet the criteria for classification as hazardous as defined in EU or GHS regulations.

OSHA HCS 2012: Specific Target Organ Toxicity - Repeated Exposure, Category 1.

LABEL ELEMENTS	HAZARD STATEMENT
 OSHA HCS 2012 - DANGER	May cause eye irritation. Causes damage to organs through prolonged or repeated exposure. May cause respiratory tract irritation

PRECAUTIONARY STATEMENTS

PREVENTION - Wear eye protection. Avoid breathing dust. Wear respiratory protection (in case of inadequate ventilation).

RESPONSE - IF ON SKIN: Rinse with water.
IF IN EYES: Rinse with water, seek medical attention if discomfort continues.
IF INHALED: Move the exposed person to fresh air, keep at rest and comfortable. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or later develops
IF SWALLOWED: Rinse mouth.

STORAGE - Keep product dry.

DISPOSAL - Generally inert. Dispose in accordance with regulations.

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS - None.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS #	Chemical Name	Percent Wt.
65997-17-3	Glass, Amorphous	100%
7631-86-9	Silicon Dioxide	60-75%
1344-81-2	Aluminum Oxide	<2.1%
1305-78-8	Calcium Oxide	5-12%
1309-48-4	Magnesium Oxide	<4%
1313-59-3	Sodium Oxide	12-18%
68784-55-4	Calcium Phosphate	<1.2%

SECTION 4 - FIRST AID MEASURES

INHALATION: If discomfort, irritation or symptoms of pulmonary involvement develop, remove from exposure, give oxygen and seek medical attention.

SKIN: Remove contaminated clothing. Thoroughly wash affected area with mild soap or detergent and water and prevent further contact. Seek medical attention if irritation occurs.

EYE: Do not rub eyes. Wash eyes, including under eyelids, immediately with copious amounts of water for 15 minutes. Contact lenses should not be worn when working with this material. Seek medical attention.

INGESTION: In the unlikely event of ingestion of a large quantity of material, do not induce vomiting; drink water or milk; seek medical attention.

MOST IMPORTANT SYMPTOMS AND EFFECTS

Acute (immediate):	Chronic (delayed):
Refer to Section 11 - Toxicological Information	Refer to Section 11 - Toxicological Information

NOTES TO PHYSICIAN

All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

SECTION 5 - FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Suitable Extinguishing Media: Non-flammable

Unsuitable Extinguishing Media: No specific information.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Unusual Fire and Explosion Hazards: No specific information.

Hazardous Combustion Products: No specific information.

Advice for Firefighters: Standard personal protective equipment.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use adequate ventilation or dust mask approved by NIOSH. Wear adequate eye protection.

Emergency Procedures: No special emergency procedures, use adequate ventilation.

Environmental Precautions: Avoid run off to waterways and sewers

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Containment: Contain and cover spill to minimize dust emission

Clean Up: Clean up by sweeping, shoveling, vacuuming, or flushing with water.

Neutralizing Chemicals: None required

Disposal: Generally inert. Dispose in accordance with regulations – or recycle and use beneficially in other applications.

SECTION 7 - HANDLING AND STORAGE

Handling: Use adequate ventilation and/or dust mask approved by NIOSH. Wear adequate eye protection. Exposed skin may become dry and irritated with prolonged contact. Avoid contact with food and ingestion.

Storage: Keep product dry. Provide proper ventilation when handling this material to minimize dust.

Incompatible Materials or Ignition Sources: Avoid contact with hydrofluoric acid

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	Percent Wt.	ACGIH TLV (TWA) (mg/m^3)	OSHA PEL (TWA) (mg/m^3)	NIOSH REL (TWA) (mg/m^3)	Cancer
Glass, Amorphous	100%	10	10	6	No
Silicon Dioxide	60-75%	10	15 (total) 5 (resp)	6	No
Aluminum Oxide	<2.1%	10	10 (total) 5 (resp)	Not established	No
Calcium Oxide	5-12%	2	2	2	No
Magnesium Oxide	<4%	10 (fume)	10 (total) (resp)	1	No
Sodium Oxide	12-18%	Not established	Not established	Not established	No
Calcium Phosphate	<1.2%	10 (total)	15 (total)	Not established	No

CONTROL PARAMETERS

Eye Wash: Ensure that eye wash stations are close to the workplace location

Exposure: Evaluate degree of exposure and use PPE as necessary

Ventilation: Local exhaust or ventilation adequate to reduce exposures below appropriate limits

Other: Ensure ventilation is adequate to maintain dust exposure below the exposure standard for personnel adjacent to the grit blasting area. Ensure that all blast cleaning equipment complies with Workcover and all appropriate Regulatory Authority Regulations and Codes of Practice.

EXPOSURE CONTROLS

Eye Protection: ANSI, CSA or ATM approved glasses or goggles. Dust goggles should be worn if excessive emissions are present and when wearing contact lenses.

Respiratory Protection: Follow OSHA respirator guidelines found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hand Protection: No special requirements. Wear gloves to protect skin.

Skin Protection: No special requirements. Wear appropriate clothing to minimize skin contact.

Footwear: No special requirements.

Protection: Operator must wear Abrasive Blast Helmet Air Line Respirator of a type complying with AS1716. A protective Leather Jacket or suit, Leather Hand and Foot protection with Steel Toe Cap inserts. Use hearing protection when working in blast cleaning operations.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

MATERIAL DESCRIPTION

Physical Form: Off-White Powder

Color: Off-White

Taste: Negligible

Particulate Size: 76 µg

Odor Threshold: N/A

Appearance / Description: Crushed glass

Odor: Negligible

Particulate Type:

Aerosol Type: Not relevant

Physical & Chemical Properties: Data lacking

GENERAL PROPERTIES

Boiling Point: No data available

Decomposition Temperature: No data available

pH: 6

Density: 88 lb/ft^3

Water Solubility: Insoluble

Viscosity: N/A

Oxidizing Properties: No data available

Melting Point: 800°C

Head of Decomposition: No data available

Specific Gravity / Relative Density: 2.46

Bulk Density: No data available

Solvent Solubility: No data available

Explosive Properties: No data available

VOLATILITY

Vapor Pressure: N/A

Evaporation Rate: N/A

VOC (Vol.) N/A

Volatiles (Vol.) N/A

Vapor Density: N/A

VOC (Wt.) N/A

Volatiles (Wt.) N/A

FLAMMABILITY		ENVIRONMENTAL	
Flash Point:	Not combustible	**Half Life:**	Data lacking
Self-Accelerating Decomposition Temp (SADT):	Not relevant	**Coefficient of Water/Oil Distribution:**	Not relevant
Heat of Combustion (ΔHc):	Not relevant	**Bioconcentration Factor:**	Data lacking
Burning Time:	Not relevant		
Flame Height:	Not relevant	**Chemical Oxygen Demand:**	Data lacking
Ignition Distance:	Not relevant	**Degradation:**	Data lacking
LEL:	Not relevant	**Octanol/Water Partition Coefficient:**	Not relevant
UEL:	Not relevant		
Autoignition:	Not relevant	**Bioaccumulation Factor:**	Data lacking
Flame Duration:	Not relevant		
Flame Extension:	Not relevant	**Biochemical Oxygen Demand (BOD/BOD5):**	Not relevant
Flammability (solid, gas):	Not relevant	**Persistence:**	Data lacking

SECTION 10 - STABILITY AND REACTIVITY

Reactivity: Most common chemicals are non-reactive with glass

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Glass will react with Hydrofluoric Acid

Conditions to Avoid: As with any dust, there is the potential for a dust explosion and thus ventilation should be such that gross levels of dust do not accumulate.

Incompatible Materials: Glass will react with Hydrofluoric Acid

Hazardous Decomposition Products: Will not occur

SECTION 11 - TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECT

GHS PROPERTIES	CLASSIFICATION
Acute Toxicity:	OSHA HCS 2012 • Classification criteria not met
Aspiration Hazard:	OSHA HCS 2012 • Classification criteria not met
Carcinogenicity:	OSHA HCS 2012 • Classification criteria not met
Germ Cell Mutagenicity:	OSHA HCS 2012 • Classification criteria not met
Respiratory Sensitization:	OSHA HCS 2012 • Classification criteria not met
Serious Eye Damage/Irritation:	OSHA HCS 2012 • Classification criteria not met
Skin Corrosion/Irritation:	OSHA HCS 2012 • Classification criteria not met
Skin Sensitization:	OSHA HCS 2012 • Classification criteria not met
STOT-RE 2:	OSHA HCS 2012 • Classification criteria not met
STOT-SE:	OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
Toxicity for Reproduction:	OSHA HCS 2012 • Classification criteria not met

POTENTIAL HEALTH EFFECTS

Inhalation:	**Skin:**	**Eye:**	**Ingestion:**
Acute (Immediate): Irritation, coughing	*Acute (Immediate):* Irritation	*Acute (Immediate):* Irritation	*Acute (Immediate):* Irritation
Chronic (Delayed): Respiratory irritation, pneumoconiosis	*Chronic (Delayed):* Data lacking	*Chronic (Delayed):* Data lacking	*Chronic (Delayed):* Data lacking

SECTION 12 - ECOLOGICAL INFORMATION

Toxicity: Material data lacking

Persistence and Degradability: Material data lacking

Bioaccumulative Potential: Material data lacking

Mobility in Soil: Material data lacking

Other Adverse Effects: Material data lacking

Other Information: Material data lacking

SECTION 13 - DISPOSAL CONSIDERATIONS

Product Waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging Waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: None

DOT Hazard Class: None

DOT Label(s): None

UN Number: Not applicable.

UN Proper Shipping Names: Not applicable.

Transport Hazard Class: Not applicable.

Packaging Group: Not applicable.

Crushed glass is classified as a non-hazardous material by the Canadian Transportation of Dangerous Good (TDG) Regulations and the US Department of Transportations (DOT). EU Transportation: Road (ADR); Rail (RID); Sea (IMDG); Air (ICO/IATA) – not restricted.

International Maritime Dangerous Goods (IMDG Code) – Not classified.

Transport in bulk EU Annex II of MARPOL73/78 and the IBC Code) – Not applicable.

SECTION 15 - REGULATORY INFORMATION

CAS No.	Chemical Name	SARA 302	SARA 304	SARA 313	RCRA	CAA Sec. 112
65997-17-3	Glass, Amorphous	No	No	No	No	No
7631-86-9	Silicon Dioxide	No	No	No	No	No
1344-81-2	Aluminum Oxide	No	No	No	No	No
1305-78-8	Calcium Oxide	No	No	No	No	No
1309-48-4	Magnesium Oxide	No	No	No	No	No
1313-59-3	Sodium Oxide	No	No	No	No	No
68784-55-4	Calcium Phosphate	No	No	No	No	No

SECTION 16 - OTHER INFORMATION

Last Revision Date: 1/18/2022 **Preparation Date:** 8/29/2019

Disclaimer / Statement of Liability: The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstance of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Matt Sheeder
Apex Companies LLC
3227 99th Street
Urbandale, Iowa 50322

Generated 8/19/2025 2:18:05 PM

JOB DESCRIPTION

Sandborn Sampling

JOB NUMBER

310-312986-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

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Authorized for release by
Bob Michels, Project Manager I
Bob.Michels@et.eurofinsus.com
(319)277-2401

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Job Narrative
310-312986-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The sample was received on 8/8/2025 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 6.0°C.

GC/MS VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
Method 6010D - TCLP: The low level continuing calibration verification (CCVL) associated with batch 310-463709 recovered above the upper control limit for Silver. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Sample Summary

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312986-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-312986-1	Sanborn-Blast Media Drum 3	Solid	08/07/25 11:18	08/08/25 16:20	Iowa

Detection Summary

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312986-1

Client Sample ID: Sanborn-Blast Media Drum 3

Lab Sample ID: 310-312986-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.407		0.200		mg/L	1		6010D	TCLP
Chromium	2.06		0.0200		mg/L	1		6010D	TCLP
Lead	1.31		0.100		mg/L	1		6010D	TCLP

This Detection Summary does not include radiochemical test results.

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312986-1

Client Sample ID: Sanborn-Blast Media Drum 3
Date Collected: 08/07/25 11:18
Date Received: 08/08/25 16:20

Lab Sample ID: 310-312986-1
Matrix: Solid

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.100		0.100		mg/L			08/19/25 10:06	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*122*		*80 - 126*		*08/19/25 10:06*	*20*
Toluene-d8 (Surr)	*97*		*80 - 120*		*08/19/25 10:06*	*20*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*08/19/25 10:06*	*20*

Method: SW846 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.100		0.100		mg/L		08/13/25 11:00	08/14/25 14:44	1
Barium	**0.407**		0.200		mg/L		08/13/25 11:00	08/14/25 14:44	1
Cadmium	<0.0200		0.0200		mg/L		08/13/25 11:00	08/14/25 14:44	1
Chromium	**2.06**		0.0200		mg/L		08/13/25 11:00	08/14/25 14:44	1
Lead	**1.31**		0.100		mg/L		08/13/25 11:00	08/14/25 14:44	1
Selenium	<0.100		0.100		mg/L		08/13/25 11:00	08/14/25 14:44	1
Silver	<0.0500	^3+	0.0500		mg/L		08/13/25 11:00	08/14/25 14:44	1

Method: SW846 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00200		0.00200		mg/L		08/13/25 15:20	08/14/25 10:12	1

Definitions/Glossary

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312986-1

Qualifiers

Metals

Qualifier	Qualifier Description
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Surrogate Summary

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312986-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)							
		DBFM	TOL	BFB					
Lab Sample ID	Client Sample ID	(80-126)	(80-120)	(80-120)					
310-312986-1	Sanborn-Blast Media Drum 3	122	97	101					
LB 310-463743/1-A	Method Blank	124	96	100					
LCS 310-463743/2-A	Lab Control Sample	89	101	107					

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: LB 310-463743/1-A
Matrix: Solid
Analysis Batch: 463944

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.100		0.100		mg/L			08/19/25 09:21	20

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*124*		*80 - 126*		*08/19/25 09:21*	*20*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/19/25 09:21*	*20*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*08/19/25 09:21*	*20*

Lab Sample ID: LCS 310-463743/2-A
Matrix: Solid
Analysis Batch: 463944

Client Sample ID: Lab Control Sample
Prep Type: TCLP

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	2.00	1.941		mg/L		97	70 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*89*		*80 - 126*
Toluene-d8 (Surr)	*101*		*80 - 120*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*

Method: 6010D - Metals (ICP)

Lab Sample ID: LB 310-463421/1-B
Matrix: Solid
Analysis Batch: 463709

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 463507

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.100		0.100		mg/L		08/13/25 11:00	08/14/25 14:14	1
Barium	<0.200		0.200		mg/L		08/13/25 11:00	08/14/25 14:14	1
Cadmium	<0.0200		0.0200		mg/L		08/13/25 11:00	08/14/25 14:14	1
Chromium	<0.0200		0.0200		mg/L		08/13/25 11:00	08/14/25 14:14	1
Lead	<0.100		0.100		mg/L		08/13/25 11:00	08/14/25 14:14	1
Selenium	<0.100		0.100		mg/L		08/13/25 11:00	08/14/25 14:14	1
Silver	<0.0500	^3+	0.0500		mg/L		08/13/25 11:00	08/14/25 14:14	1

Lab Sample ID: LCS 310-463421/2-B
Matrix: Solid
Analysis Batch: 463709

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 463507

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	4.00	3.940		mg/L		98	80 - 120
Barium	2.00	2.023		mg/L		101	80 - 120
Cadmium	2.00	1.845		mg/L		92	80 - 120
Chromium	2.00	1.889		mg/L		94	80 - 120
Lead	4.00	3.646		mg/L		91	80 - 120
Selenium	8.00	7.860		mg/L		98	80 - 120
Silver	2.00	1.969	^3+	mg/L		98	80 - 120

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312986-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LB 310-463421/1-D
Matrix: Solid
Analysis Batch: 463685

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 463528

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00200		0.00200		mg/L		08/13/25 15:20	08/14/25 09:25	1

Lab Sample ID: LCS 310-463421/2-D
Matrix: Solid
Analysis Batch: 463685

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 463528

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.0167	0.01748		mg/L		105	80 - 120

QC Association Summary

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312986-1

GC/MS VOA

Leach Batch: 463743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-312986-1	Sanborn-Blast Media Drum 3	TCLP	Solid	1311	
LB 310-463743/1-A	Method Blank	TCLP	Solid	1311	
LCS 310-463743/2-A	Lab Control Sample	TCLP	Solid	1311	

Analysis Batch: 463944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-312986-1	Sanborn-Blast Media Drum 3	TCLP	Solid	8260D	463743
LB 310-463743/1-A	Method Blank	TCLP	Solid	8260D	463743
LCS 310-463743/2-A	Lab Control Sample	TCLP	Solid	8260D	463743

Metals

Leach Batch: 463421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-312986-1	Sanborn-Blast Media Drum 3	TCLP	Solid	1311	
LB 310-463421/1-B	Method Blank	TCLP	Solid	1311	
LB 310-463421/1-D	Method Blank	TCLP	Solid	1311	
LCS 310-463421/2-B	Lab Control Sample	TCLP	Solid	1311	
LCS 310-463421/2-D	Lab Control Sample	TCLP	Solid	1311	

Prep Batch: 463507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-312986-1	Sanborn-Blast Media Drum 3	TCLP	Solid	3010A	463421
LB 310-463421/1-B	Method Blank	TCLP	Solid	3010A	463421
LCS 310-463421/2-B	Lab Control Sample	TCLP	Solid	3010A	463421

Prep Batch: 463528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-312986-1	Sanborn-Blast Media Drum 3	TCLP	Solid	7470A	463421
LB 310-463421/1-D	Method Blank	TCLP	Solid	7470A	463421
LCS 310-463421/2-D	Lab Control Sample	TCLP	Solid	7470A	463421

Analysis Batch: 463685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-312986-1	Sanborn-Blast Media Drum 3	TCLP	Solid	7470A	463528
LB 310-463421/1-D	Method Blank	TCLP	Solid	7470A	463528
LCS 310-463421/2-D	Lab Control Sample	TCLP	Solid	7470A	463528

Analysis Batch: 463709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-312986-1	Sanborn-Blast Media Drum 3	TCLP	Solid	6010D	463507
LB 310-463421/1-B	Method Blank	TCLP	Solid	6010D	463507
LCS 310-463421/2-B	Lab Control Sample	TCLP	Solid	6010D	463507

Lab Chronicle

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312986-1

Client Sample ID: Sanborn-Blast Media Drum 3

Lab Sample ID: 310-312986-1

Date Collected: 08/07/25 11:18

Matrix: Solid

Date Received: 08/08/25 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			463743	XG3Z	EET CF	08/14/25 16:40 - 08/15/25 08:00 [1]
TCLP	Analysis	8260D		20	463944	WSE8	EET CF	08/19/25 10:06
TCLP	Leach	1311			463421	XG3Z	EET CF	08/12/25 16:00 - 08/13/25 08:00 [1]
TCLP	Prep	3010A			463507	QTZ5	EET CF	08/13/25 11:00
TCLP	Analysis	6010D		1	463709	ZRI4	EET CF	08/14/25 14:44
TCLP	Leach	1311			463421	XG3Z	EET CF	08/12/25 16:00 - 08/13/25 08:00 [1]
TCLP	Prep	7470A			463528	QTZ5	EET CF	08/13/25 15:20
TCLP	Analysis	7470A		1	463685	RLT9	EET CF	08/14/25 10:12

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312986-1

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-25

Method Summary

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312986-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
6010D	Metals (ICP)	SW846	EET CF
7470A	Mercury (CVAA)	SW846	EET CF
1311	TCLP Extraction	SW846	EET CF
1311	TCLP Zero Headspace Extraction	SW846	EET CF
3010A	Preparation, Total Metals	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

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310-312986 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: APEX			
City/State:	CITY: Urbandale	STATE: IA	Project:
Receipt Information			
Date/Time Received	DATE: 8.8.25	TIME: 1620	Received By: PH

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other _____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes ☐ No	*If yes*	Cooler ID
Multiple Coolers?	☐ Yes ☒ No	*If yes*	Cooler # _____ of _____
Cooler Custody Seals Present?	☐ Yes ☒ No	*If yes*	Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present?	☐ Yes ☒ No	*If yes*	Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?	☐ Yes ☒ No	*If yes*	Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE

Thermometer ID: AA	Correction Factor (°C): 0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C)	Corrected Temp (°C):

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:	1602 Jar	
Uncorrected Temp (°C)	6.0	
Corrected Temp (°C)	6.0	

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e g , bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

Eurofins TestAmerica, Cedar Falls
3019 Venture Way

Cedar Falls, IA 50613
phone 319 277 2401 fax 319.277.2425

Chain of Custody Record

eurofins Environment Testing America

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	**Project Manager: Matthew Sheeder**		COC No
Apex Companies,LLC	Email Matthew Sheeder@apexcos.com	**Site Contact: Cole Hackman**	8/7/2025 — 1 of 1 COCs
3227 99th St	**Tel/Fax: (515) 418-0105**	**Lab Contact: Bob Michels**	**Carrier:** — TALS Project #
Urbandale, Iowa 50322	**Analysis Turnaround Time**		Sampler
Phone (515) 418-0105	☐ CALENDAR DAYS ☑ WORKING DAYS		**For Lab Use Only:**
	TAT if different from Below		Walk-in Client
Project Name Sandborn Sampling	☐ 2 weeks		Lab Sampling
Site. Sanborn, IA Terminal	☑ 1 week		Job / SDG No
P O #	☐ 2 days		
	☐ 1 day		

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	TCLP Benzene	TCLP RCRA Metals	Sample Specific Notes
Sanborn-Blast Media Drum 3	8/7/2025	11 18	C	Sand	2	N	N	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample

☐ Non-Hazard ☐ Flammable S ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for Months

Special Instructions/QC Requirements & Comments: cC: Msheeder@apexcos.com, Dhruby@apexcos.com w/ results

Custody Seals Intact ☐ Yes	Custody Seal No		Cooler Temp (°C) Obs'd _____ Corr'd _____		Therm ID No _____
Relinquished by: Cole Hackman	Company: Apex	Date/Time: 8-7-25 1 5C	Received by:	Company: Eurofins	Date/Time: 8/8/25 1330
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: SC	Company:	Date/Time: 8/8/25 1120

Form No. CA-C-WI-002, Rev. 4.35, dated 10/6/2020

8/19/2025

Login Sample Receipt Checklist

Client: Apex Companies LLC

Job Number: 310-312986-1
SDG Number:

Login Number: 312986
List Number: 1
Creator: Cappi, Sage

List Source: Eurofins Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

ANALYTICAL REPORT

PREPARED FOR

Attn: Matt Sheeder
Apex Companies LLC
3227 99th Street
Urbandale, Iowa 50322

Generated 8/19/2025 2:18:05 PM

JOB DESCRIPTION

Sandborn Sampling

JOB NUMBER

310-312987-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

Generated
8/19/2025 2:18:05 PM

Authorized for release by
Bob Michels, Project Manager I
Bob.Michels@et.eurofinsus.com
(319)277-2401

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Job Narrative
310-312987-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The sample was received on 8/8/2025 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 6.0°C.

GC/MS VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
Method 6010D - TCLP: The low level continuing calibration verification (CCVL) associated with batch 310-463709 recovered above the upper control limit for Silver. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Sample Summary

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312987-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-312987-1	Sanborn-Blast Media Drum 1	Solid	08/07/25 11:11	08/08/25 16:20	Iowa

Detection Summary

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312987-1

Client Sample ID: Sanborn-Blast Media Drum 1

Lab Sample ID: 310-312987-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.385		0.200		mg/L	1		6010D	TCLP
Chromium	1.37		0.0200		mg/L	1		6010D	TCLP
Lead	2.11		0.100		mg/L	1		6010D	TCLP

This Detection Summary does not include radiochemical test results.

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312987-1

Client Sample ID: Sanborn-Blast Media Drum 1

Lab Sample ID: 310-312987-1

Date Collected: 08/07/25 11:11

Matrix: Solid

Date Received: 08/08/25 16:20

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.100		0.100		mg/L			08/19/25 10:28	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*117*		*80 - 126*		*08/19/25 10:28*	*20*
Toluene-d8 (Surr)	*98*		*80 - 120*		*08/19/25 10:28*	*20*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*08/19/25 10:28*	*20*

Method: SW846 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.100		0.100		mg/L		08/13/25 11:00	08/14/25 14:46	1
Barium	**0.385**		0.200		mg/L		08/13/25 11:00	08/14/25 14:46	1
Cadmium	<0.0200		0.0200		mg/L		08/13/25 11:00	08/14/25 14:46	1
Chromium	**1.37**		0.0200		mg/L		08/13/25 11:00	08/14/25 14:46	1
Lead	**2.11**		0.100		mg/L		08/13/25 11:00	08/14/25 14:46	1
Selenium	<0.100		0.100		mg/L		08/13/25 11:00	08/14/25 14:46	1
Silver	<0.0500	^3+	0.0500		mg/L		08/13/25 11:00	08/14/25 14:46	1

Method: SW846 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00200		0.00200		mg/L		08/13/25 15:20	08/14/25 10:14	1

Definitions/Glossary

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312987-1

Qualifiers

Metals

Qualifier	Qualifier Description
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Surrogate Summary

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312987-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)							
		DBFM	TOL	BFB					
Lab Sample ID	Client Sample ID	(80-126)	(80-120)	(80-120)					
310-312987-1	Sanborn-Blast Media Drum 1	117	98	102					
LB 310-463743/1-A	Method Blank	124	96	100					
LCS 310-463743/2-A	Lab Control Sample	89	101	107					

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: LB 310-463743/1-A
Matrix: Solid
Analysis Batch: 463944

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.100		0.100		mg/L			08/19/25 09:21	20

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*124*		*80 - 126*		*08/19/25 09:21*	*20*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/19/25 09:21*	*20*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*08/19/25 09:21*	*20*

Lab Sample ID: LCS 310-463743/2-A
Matrix: Solid
Analysis Batch: 463944

Client Sample ID: Lab Control Sample
Prep Type: TCLP

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			2.00	1.941		mg/L		97	70 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*89*		*80 - 126*
Toluene-d8 (Surr)	*101*		*80 - 120*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*

Method: 6010D - Metals (ICP)

Lab Sample ID: LB 310-463421/1-B
Matrix: Solid
Analysis Batch: 463709

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 463507

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.100		0.100		mg/L		08/13/25 11:00	08/14/25 14:14	1
Barium	<0.200		0.200		mg/L		08/13/25 11:00	08/14/25 14:14	1
Cadmium	<0.0200		0.0200		mg/L		08/13/25 11:00	08/14/25 14:14	1
Chromium	<0.0200		0.0200		mg/L		08/13/25 11:00	08/14/25 14:14	1
Lead	<0.100		0.100		mg/L		08/13/25 11:00	08/14/25 14:14	1
Selenium	<0.100		0.100		mg/L		08/13/25 11:00	08/14/25 14:14	1
Silver	<0.0500	^3+	0.0500		mg/L		08/13/25 11:00	08/14/25 14:14	1

Lab Sample ID: LCS 310-463421/2-B
Matrix: Solid
Analysis Batch: 463709

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 463507

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			4.00	3.940		mg/L		98	80 - 120		
Barium			2.00	2.023		mg/L		101	80 - 120		
Cadmium			2.00	1.845		mg/L		92	80 - 120		
Chromium			2.00	1.889		mg/L		94	80 - 120		
Lead			4.00	3.646		mg/L		91	80 - 120		
Selenium			8.00	7.860		mg/L		98	80 - 120		
Silver			2.00	1.969	^3+	mg/L		98	80 - 120		

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312987-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LB 310-463421/1-D
Matrix: Solid
Analysis Batch: 463685

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 463528

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00200		0.00200		mg/L		08/13/25 15:20	08/14/25 09:25	1

Lab Sample ID: LCS 310-463421/2-D
Matrix: Solid
Analysis Batch: 463685

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 463528

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			0.0167	0.01748		mg/L		105	80 - 120		

QC Association Summary

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312987-1

GC/MS VOA

Leach Batch: 463743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-312987-1	Sanborn-Blast Media Drum 1	TCLP	Solid	1311	
LB 310-463743/1-A	Method Blank	TCLP	Solid	1311	
LCS 310-463743/2-A	Lab Control Sample	TCLP	Solid	1311	

Analysis Batch: 463944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-312987-1	Sanborn-Blast Media Drum 1	TCLP	Solid	8260D	463743
LB 310-463743/1-A	Method Blank	TCLP	Solid	8260D	463743
LCS 310-463743/2-A	Lab Control Sample	TCLP	Solid	8260D	463743

Metals

Leach Batch: 463421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-312987-1	Sanborn-Blast Media Drum 1	TCLP	Solid	1311	
LB 310-463421/1-B	Method Blank	TCLP	Solid	1311	
LB 310-463421/1-D	Method Blank	TCLP	Solid	1311	
LCS 310-463421/2-B	Lab Control Sample	TCLP	Solid	1311	
LCS 310-463421/2-D	Lab Control Sample	TCLP	Solid	1311	

Prep Batch: 463507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-312987-1	Sanborn-Blast Media Drum 1	TCLP	Solid	3010A	463421
LB 310-463421/1-B	Method Blank	TCLP	Solid	3010A	463421
LCS 310-463421/2-B	Lab Control Sample	TCLP	Solid	3010A	463421

Prep Batch: 463528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-312987-1	Sanborn-Blast Media Drum 1	TCLP	Solid	7470A	463421
LB 310-463421/1-D	Method Blank	TCLP	Solid	7470A	463421
LCS 310-463421/2-D	Lab Control Sample	TCLP	Solid	7470A	463421

Analysis Batch: 463685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-312987-1	Sanborn-Blast Media Drum 1	TCLP	Solid	7470A	463528
LB 310-463421/1-D	Method Blank	TCLP	Solid	7470A	463528
LCS 310-463421/2-D	Lab Control Sample	TCLP	Solid	7470A	463528

Analysis Batch: 463709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-312987-1	Sanborn-Blast Media Drum 1	TCLP	Solid	6010D	463507
LB 310-463421/1-B	Method Blank	TCLP	Solid	6010D	463507
LCS 310-463421/2-B	Lab Control Sample	TCLP	Solid	6010D	463507

Lab Chronicle

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312987-1

Client Sample ID: Sanborn-Blast Media Drum 1

Lab Sample ID: 310-312987-1

Date Collected: 08/07/25 11:11

Matrix: Solid

Date Received: 08/08/25 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			463743	XG3Z	EET CF	08/14/25 16:40 - 08/15/25 08:00 [1]
TCLP	Analysis	8260D		20	463944	WSE8	EET CF	08/19/25 10:28
TCLP	Leach	1311			463421	XG3Z	EET CF	08/12/25 16:00 - 08/13/25 08:00 [1]
TCLP	Prep	3010A			463507	QTZ5	EET CF	08/13/25 11:00
TCLP	Analysis	6010D		1	463709	ZRI4	EET CF	08/14/25 14:46
TCLP	Leach	1311			463421	XG3Z	EET CF	08/12/25 16:00 - 08/13/25 08:00 [1]
TCLP	Prep	7470A			463528	QTZ5	EET CF	08/13/25 15:20
TCLP	Analysis	7470A		1	463685	RLT9	EET CF	08/14/25 10:14

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312987-1

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-25

Method Summary

Client: Apex Companies LLC
Project/Site: Sandborn Sampling

Job ID: 310-312987-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
6010D	Metals (ICP)	SW846	EET CF
7470A	Mercury (CVAA)	SW846	EET CF
1311	TCLP Extraction	SW846	EET CF
1311	TCLP Zero Headspace Extraction	SW846	EET CF
3010A	Preparation, Total Metals	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

eurofins | Environment Testing America

310-312987 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: APEX

City/State: CITY: Ft Lauderdale | STATE: FL | Project:

Receipt Information

Date/Time Received: DATE: 8.8.25 | TIME: 1620 | Received By: PH

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☑ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other _____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes* Cooler ID.

Multiple Coolers? ☐ Yes ☑ No *If yes.* Cooler # _____ of _____

Cooler Custody Seals Present? ☐ Yes ☑ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☑ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☐ Yes ☑ No *If yes* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other _____ ☐ NONE

Thermometer ID: AA | Correction Factor (°C): 0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): | Corrected Temp (°C):

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used.	1602 jar	
Uncorrected Temp (°C).	6.0	
Corrected Temp (°C):	6.0	

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g , bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

Eurofins TestAmerica, Cedar Falls
3019 Venture Way

Cedar Falls, IA 50613
phone 319 277 2401 fax 319 277 2425

Chain of Custody Record

eurofins Environment Testing America

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Matthew Sheeder	Site Contact: Cole Hackman	8/7/2025	COC No
Apex Companies,LLC	Email Matthew Sheeder@apexcos.com	Lab Contact: Bob Michels	Carrier:	1 of 1 COCs
3227 99th St	Tel/Fax: (515) 418-0105			TALS Project #
Urbandale, Iowa 50322	Analysis Turnaround Time			Sampler
Phone (515) 418-0105	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
	TAT if different from Below			Walk-in Client
Project Name Sandborn Sampling	☐ 2 weeks			Lab Sampling
Site. Sanborn, IA Terminal	☑ 1 week			Job / SDG No
P O #	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	TCLP Benzene	TCLP RCRA Metals	Sample Specific Notes
Sanborn-Blast Media Drum 1	8/7/2025	11 11	C	Sand	2	N	N	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample

☐ Non-Hazard ☐ Flammable S ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for Months

Special Instructions/QC Requirements & Comments: cC: Msheeder@apexcos.com, Dhruby@apexcos.com w/ results

Custody Seals Intact ☐ Yes	Custody Seal No		Cooler Temp (°C) Obs'd _____ Corr'd _____		Therm ID No _____
Relinquished by	Company	Date/Time 8-7-25 850	Received by	Company	Date/Time 8/8/25 1330
Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Relinquished by	Company	Date/Time	Received in Laboratory by SC	Company	Date/Time 8/8/25 1020

Form No. CA-C-WI-002, Rev. 4.35, dated 10/6/2020

8/19/2025

Login Sample Receipt Checklist

Client: Apex Companies LLC

Job Number: 310-312987-1
SDG Number:

Login Number: 312987
List Number: 1
Creator: Cappi, Sage

List Source: Eurofins Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	