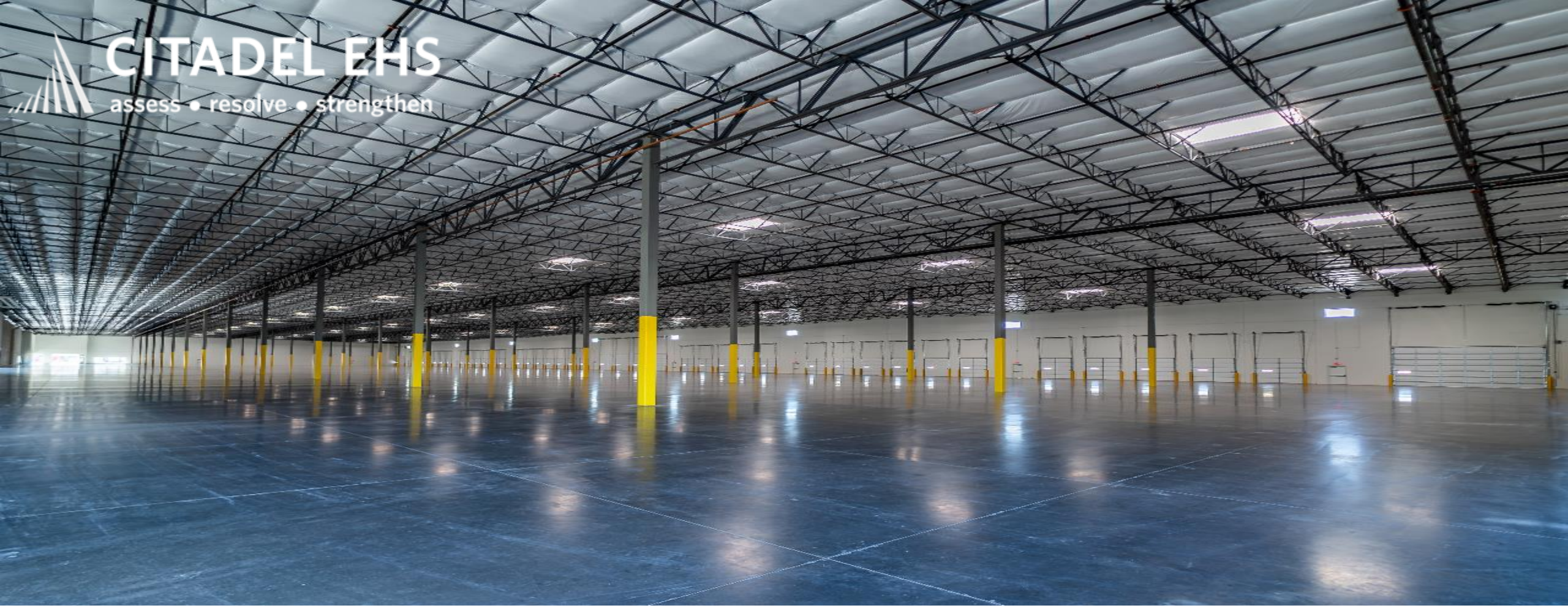

Would you let a lithium-ion battery recycling company lease your new facility?

Scott Brehmer, MPH, CIH, CSP
Citadel EHS

Who's at the Table?

Trammell Crow Company

LANDLORD/BUILDING OWNER
- Vice President
- President, Trammell Crow Arizona Development, Inc.
- Managing Director, Principal Real Estate Investors, LLC
- Environmental Managers
- Designers

Principal® CBRE

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CONSULTANT TO TRAMMELL CROW
- CIH

Li-Cycle®

INTERESTED TENANT
- Plant Manager
- Process Engineer
- CFO
- Counsel
- Executive Chairman

gilbert arizona

THE TOWN OF GILBERT, AZ
- Project Manager, Economic Development
- Planning Manager
- Fire Department

What's at Stake?

4461 E NUNNELEY RD
±138,949 SF

- ±32' clear height
- 36 truckwells and 6 grade-level loading doors (end cap grade doors are 22' X 14')
- ±52' X ±46' column spacing (typical)
- ±200' building depth
- ±180' shared truck court
- 1.63/1000 parking
- 3,000 amps 277/480v electrical service

- Rent scales up from $89k to $116k/month in rent
- 125-month lease

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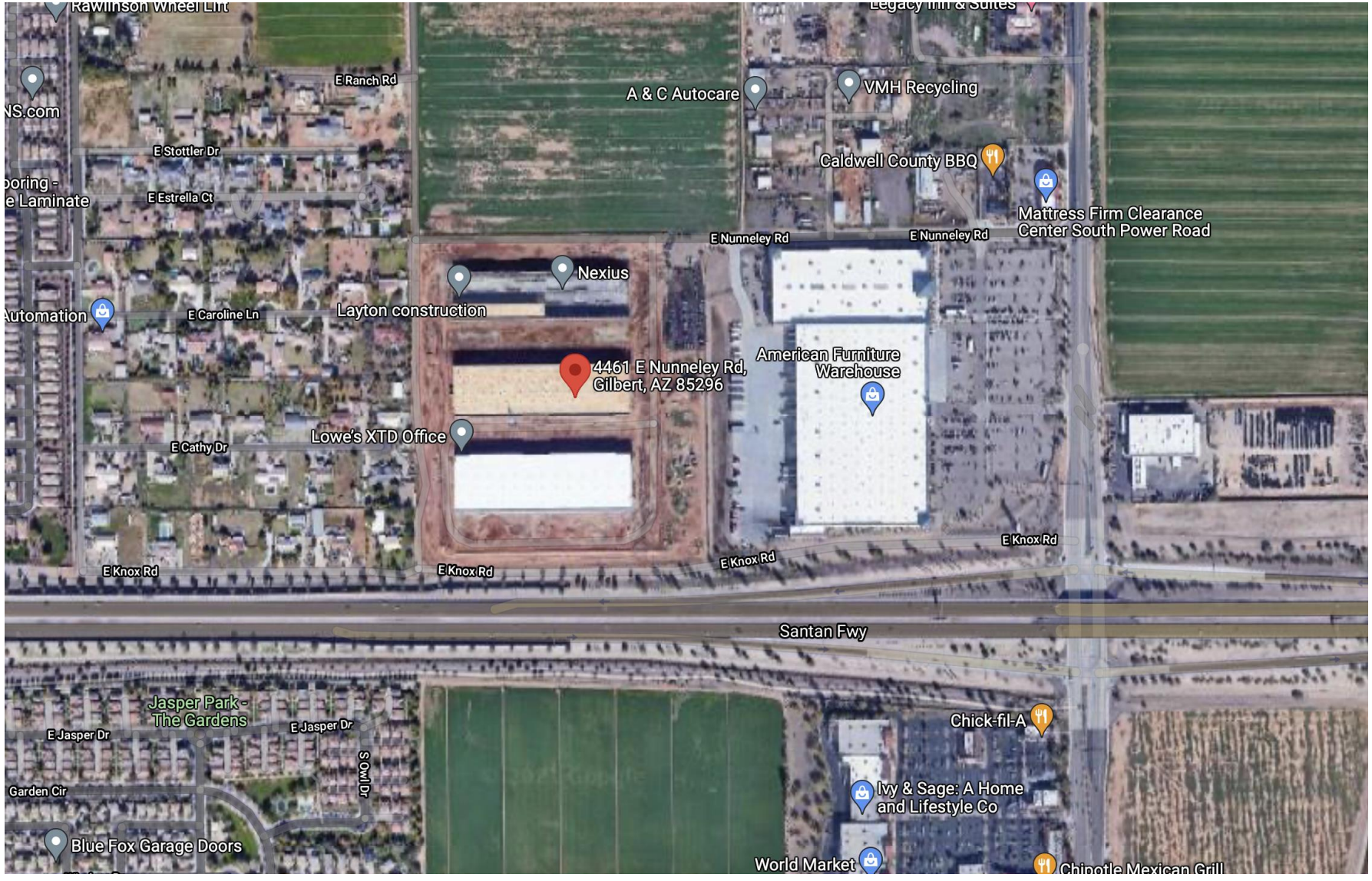
What's in the Neighborhood?



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What does Li-Cycle do?

Li-Cycle recovers critical materials from end-of-life Li-ion batteries and returns them back into the market.

Cell phones
Laptops
Tablets
E-readers

Headsets & earbuds
Gaming devices
Smart watches & fitness trackers
Cameras

Drones
Hoverboards
E-scooters and skateboards
Energy storage system

Cordless household devices
- Gardening tools
- Vacuum cleaners
- Power tools

The largest Li-ion battery recycler in North America. Listed on NYSE as LICY.

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Li-ion Batteries

What are Li-ion batteries made of?

- Critical minerals such as cobalt, graphite, and lithium, but not elemental lithium
- Li-ion batteries typically contain a Li-metal oxide, such as lithium-cobalt oxide ($LiCoO_2$). This supplies the Li-ions. Li-metal oxides are used in the cathode (+) and Li-carbon compounds are used in the anode (-).

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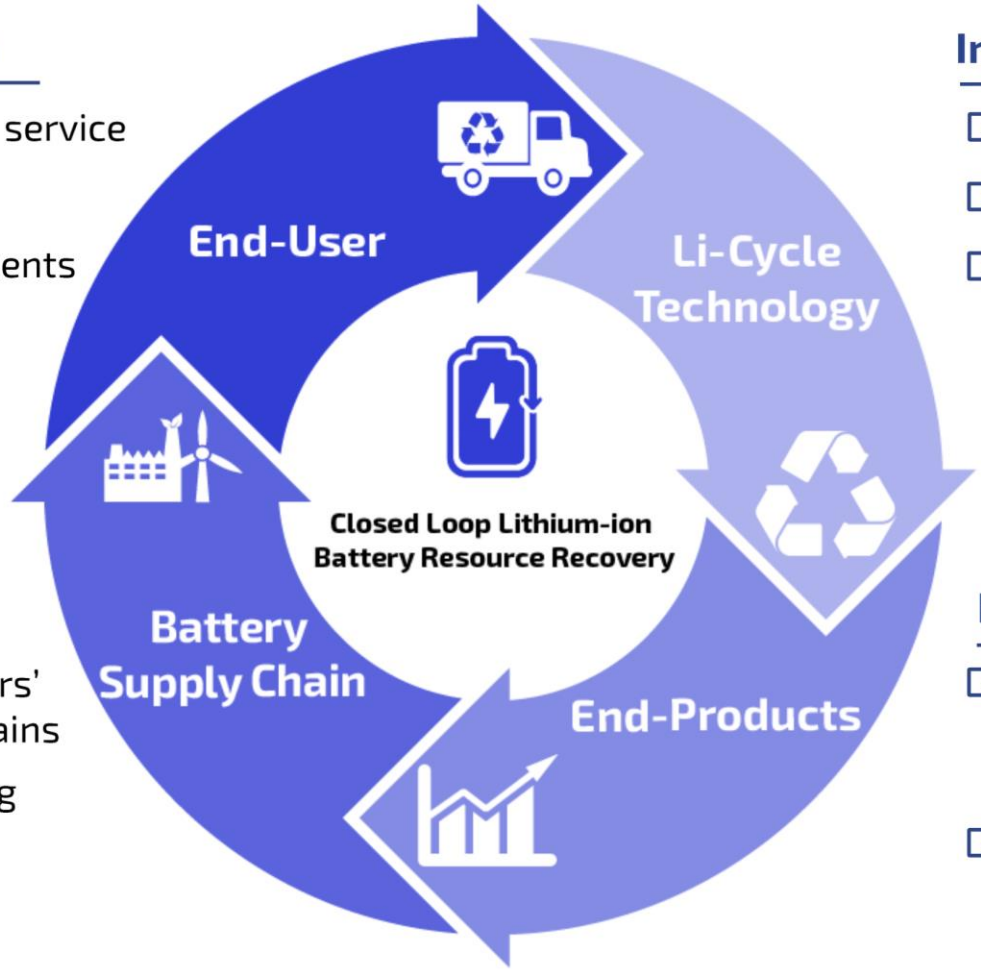
What does Li-Cycle do?

Addressing the recycling gap

- Holistic logistics coordination service
- Handle damaged batteries
- Advise on packaging requirements
- Manage battery replacement campaigns

Closing the loop

- Close the loop in our customers' lithium-ion battery supply chains
- Strategic advantage vs. mining and refining primary supply



Industry-leading recovery rates

- >90% recycling efficiency rate
- >95% functional recovery rate
- Safe and sustainable process

High value end-product sales

- Produce battery-grade end-products for re-use in battery or other technical applications
- Produce by-products reusable in the general economy

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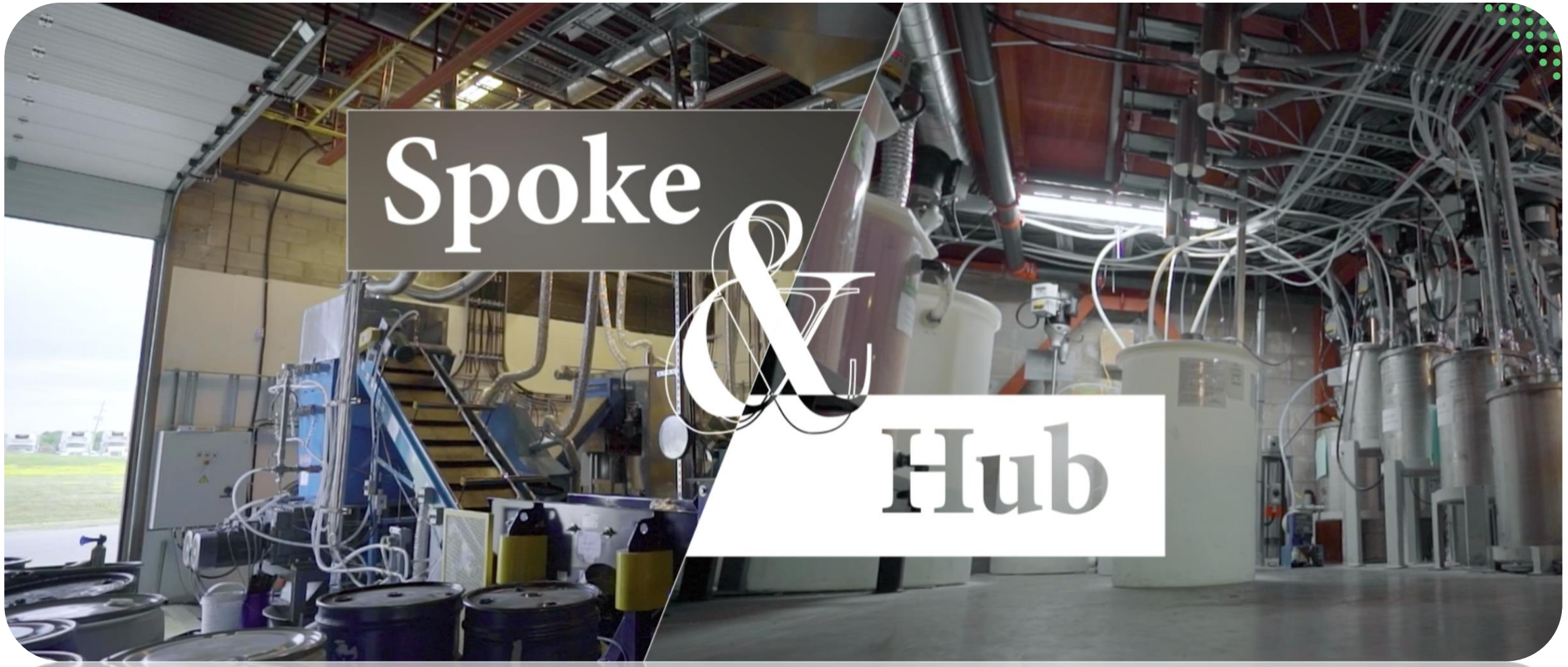
Li-Cycle Operations



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Li-Cycle Operations - Spoke

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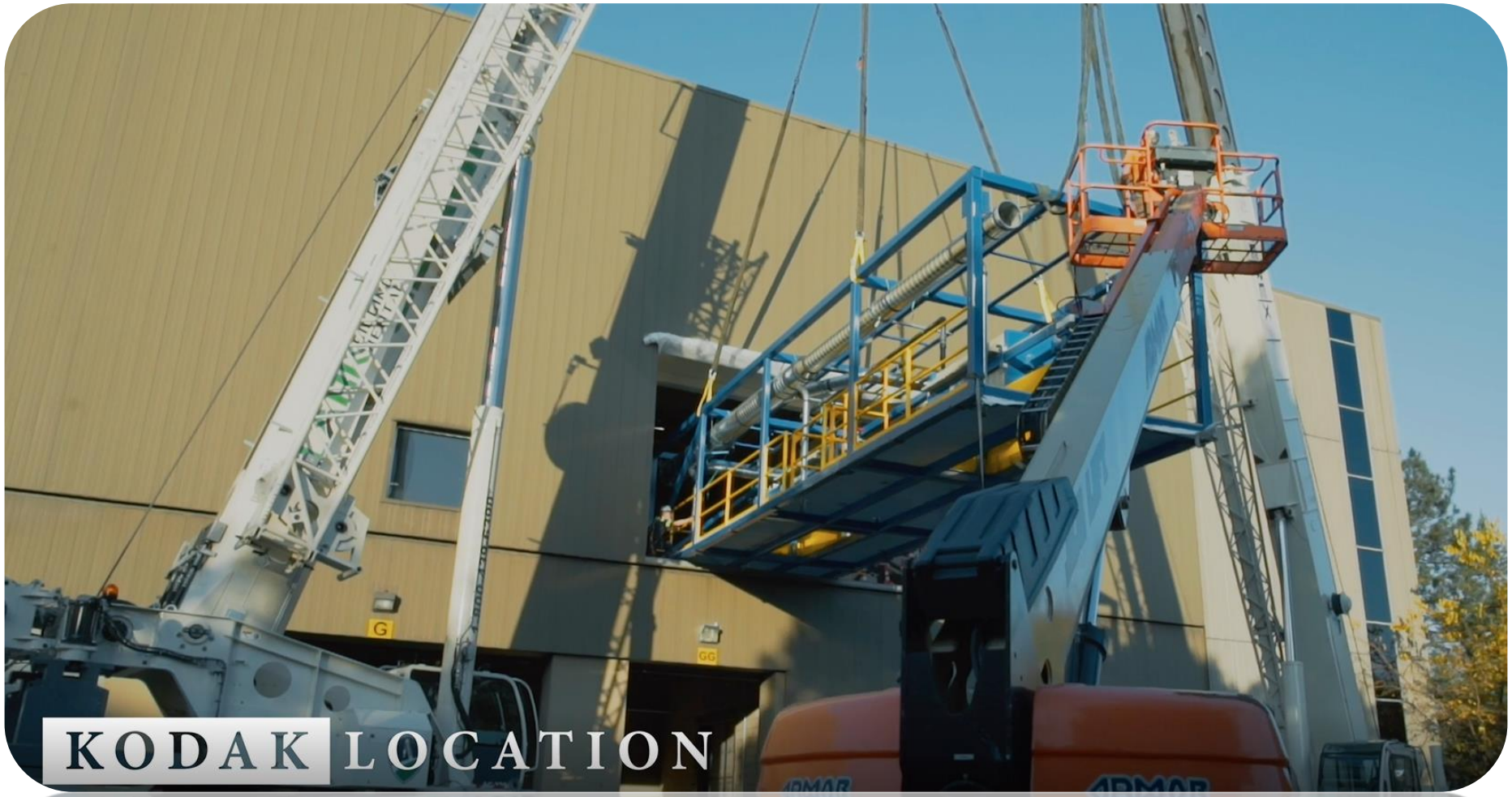
Li-Cycle Operations - Spoke



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Li-Cycle Spoke end-product

Li-Cycle Spoke end-products

Battery Materials (Black Mass)

The Spoke produces a product that consists of a mix of cathode and anode battery materials, including lithium, nickel and cobalt, as well as graphite, copper and aluminum.

Mixed Copper/Aluminum

The Spoke produces copper and aluminum metals from the processing of lithium-ion batteries. These are primarily made up of the foils found within the lithium-ion batteries.

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Li-Cycle Operations - Hub

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Li-Cycle Hub end-products

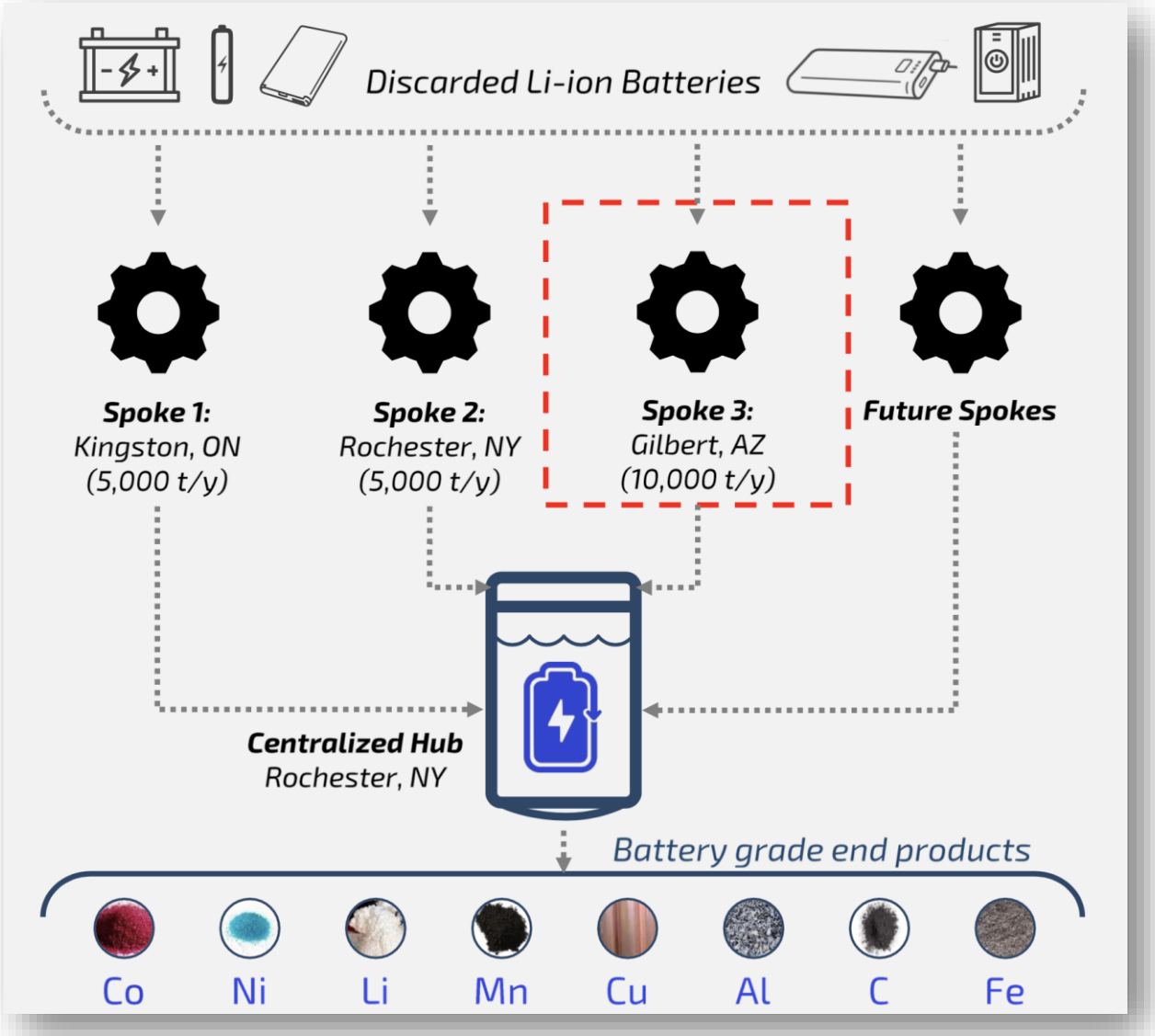
Lithium Carbonate

High purity, micronized lithium carbonate derived from end-of-life lithium-ion batteries. Suitable for use in many applications including lithium-ion and lithium polymer batteries, as well as glass and ceramics manufacturing.

Cobalt Sulphate

High purity cobalt sulphate derived from end-of-life lithium-ion batteries. Suitable for the production of cobalt containing cathode materials for lithium-ion and lithium polymer batteries.

What does Li-Cycle do?



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Proposed Quantities and Throughput

Li-Ion Batteries

- Onsite Quantity: **20 – 50 MT**
- Annual Throughput: **10,000 MT**

Hydrated Lime

- Onsite Quantity: **1 MT**
- Annual Throughput: **10 MT**

Sulphuric Acid

- Onsite Quantity: **265 GAL**
- Annual Throughput: **3,000 GAL**

Black Mass

- Onsite Storage: **50 – 100 MT**
- Annual Storage: **5,000 MT**

Mixed Plastics

- Onsite Storage: **50 – 100 MT**
- Annual Storage: **1,000 MT**

Metal Foils

- Onsite Storage: **50 – 100 MT**
- Annual Storage: **2,000 MT**

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Would you let Li-Cycle lease your building?

What might concern you as the Building Owner/Landlord?

What steps might you take to assess whether should lease your facility?

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TCC Concerns

Stated Concerns of Landlord:

Do they properly handle and store materials?

Is the recycling process safe?

Are they managing fire risk that could pose a threat to the property

Are controls and safeguards in place and adequate?

Are safety plans being implemented at the site?

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What did TCC do?

Sent Scott to Rochester, NY to observe the Spoke operation!

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What they *actually* wanted to know

- *Do they have their act together?*
- *Do they know what they're doing?*
- *How would it look to an investor?*
- *How's it smell?*
- *Is it dirty or clean?*
- *Make sure they aren't "hiding the football"*

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The Purpose & Scope of Project

- Help TCC protect the "Asset"
- Visit a Spoke in Rochester, NY to evaluate the operation
- Identify issues/risks, make recommendations
- Provide an opinion on whether to lease to Li-Cycle
- Participate in development of lease agreement

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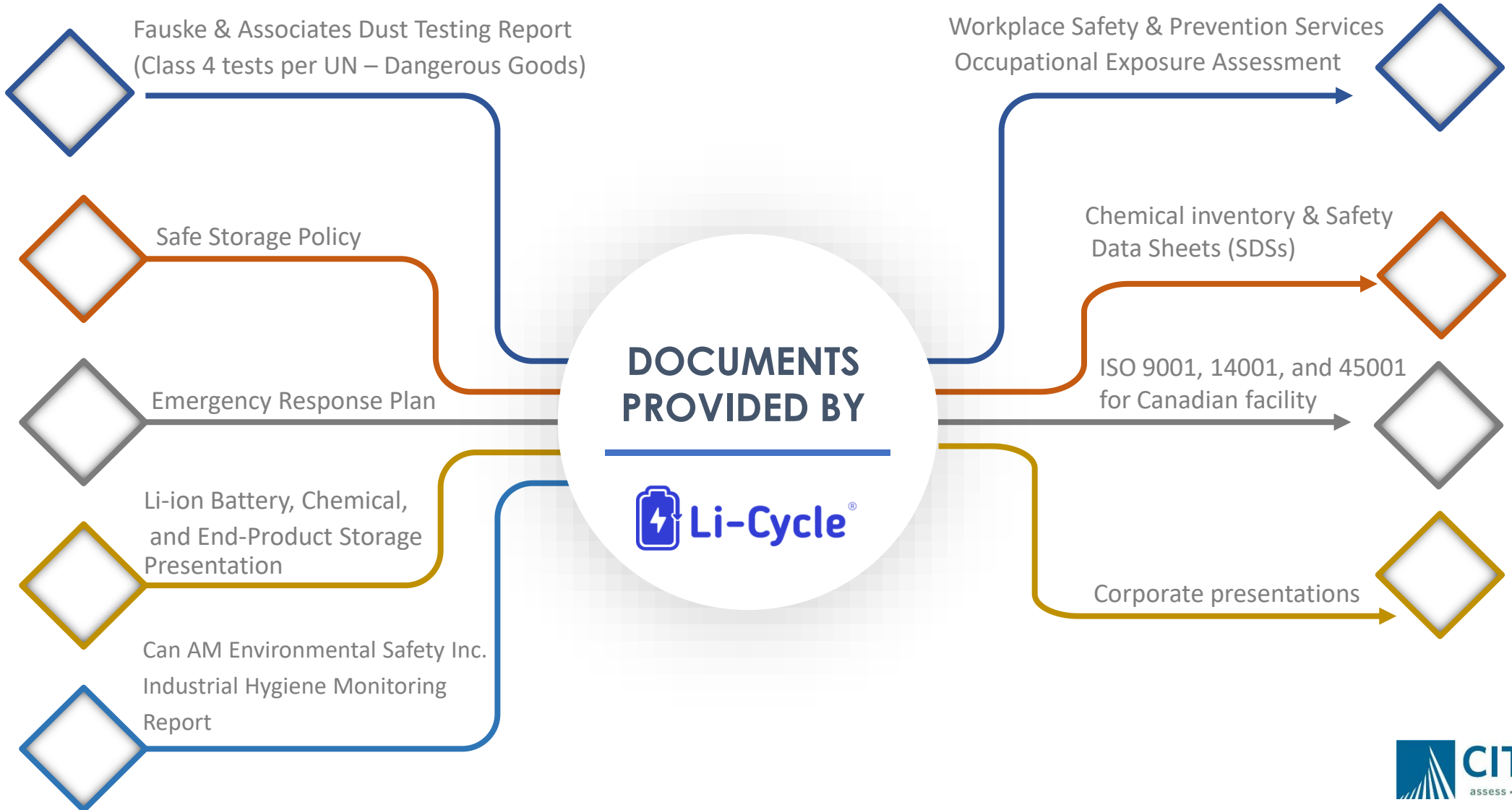
Pre site visit documentation review



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Scope of the Site Visit

- Battery recycling process including arrival of materials
- Unpacking, sorting, shredding, and drying
- Hazardous materials storage and use
- Fire protection systems and emergency equipment
- Other controls, safeguards, and plans

Site Visit to Rochester, NY – Spoke 2

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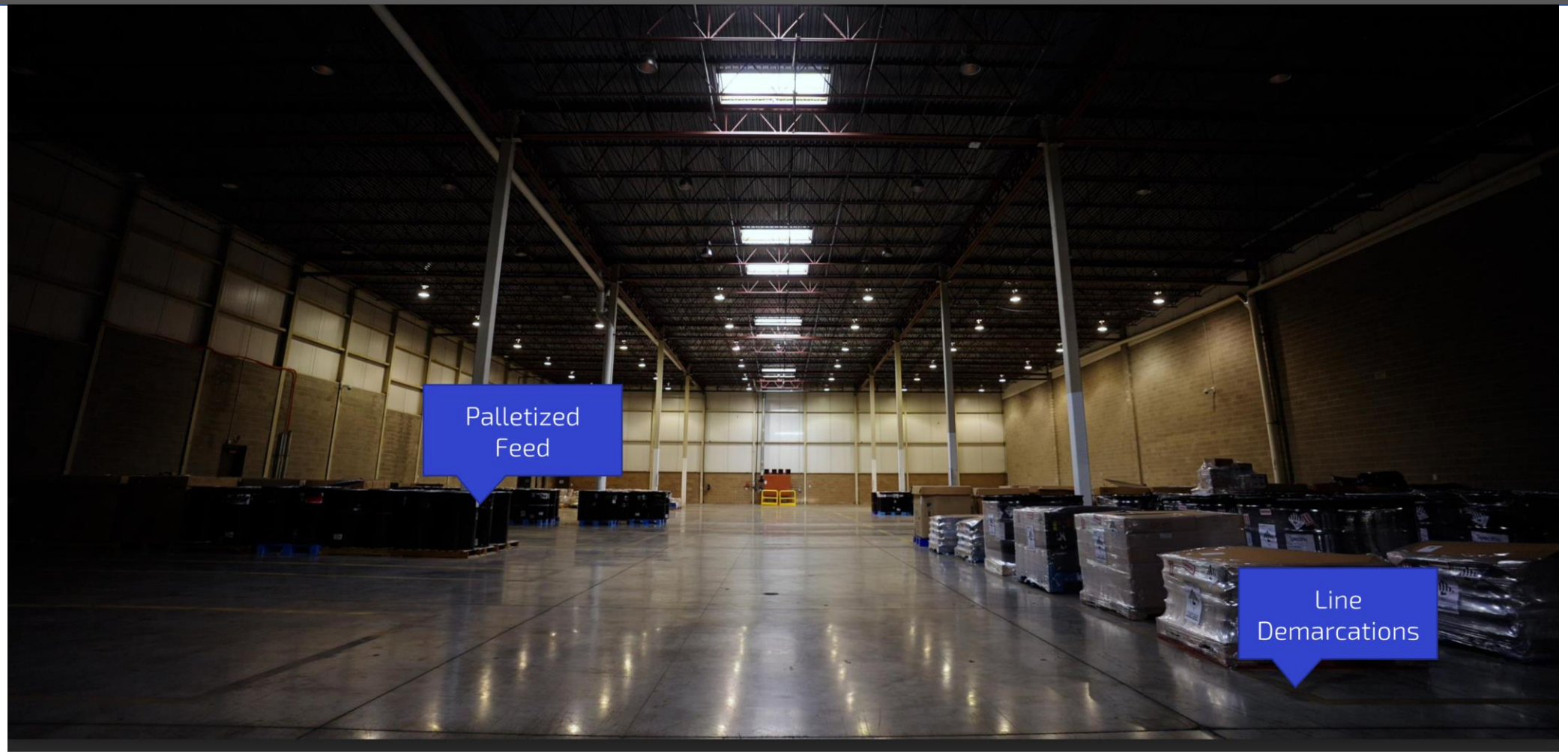
Battery Storage Warehouse & Receiving



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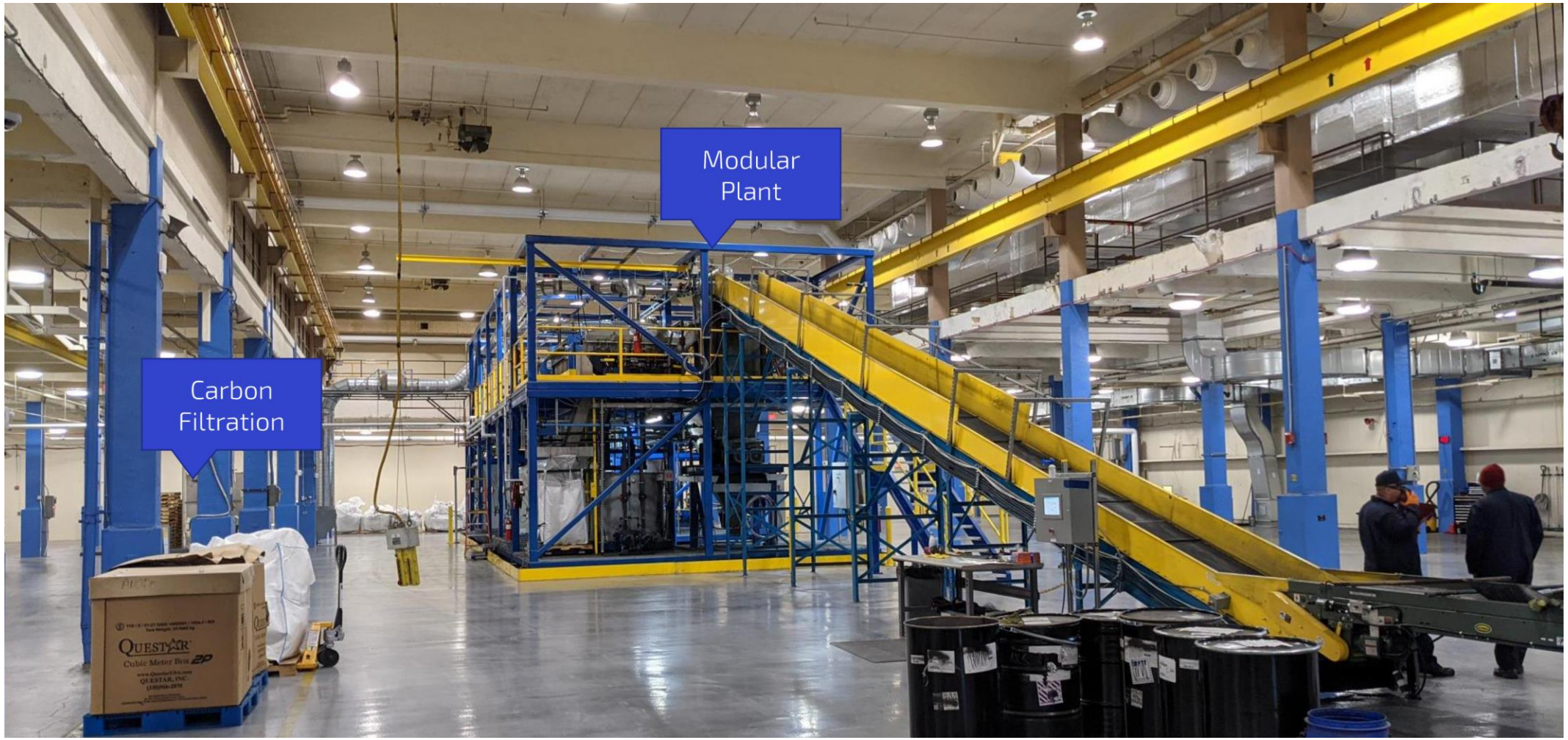
Processing Line



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Drying Room

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Observations

Automatic sprinklers are present throughout

Unpacking process includes an enclosed dust collection system

The processing line has accessible emergency stops

Batteries are packed in vermiculite by suppliers prior to shipping to Li-Cycle

Flooring in the Processing Area is epoxy coated

There is a water-tight berm beneath the processing line

Totes in the Drying Room have secondary containment

Good ventilation throughout except in the Drying Room

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Observations

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Observations

- Spill kits
- Emergency eye wash and shower stations
- ABC fire extinguishers (+1 Class D)
- Programmable Logic Controller (PLC) system
- Audible/visual alarm system with notification

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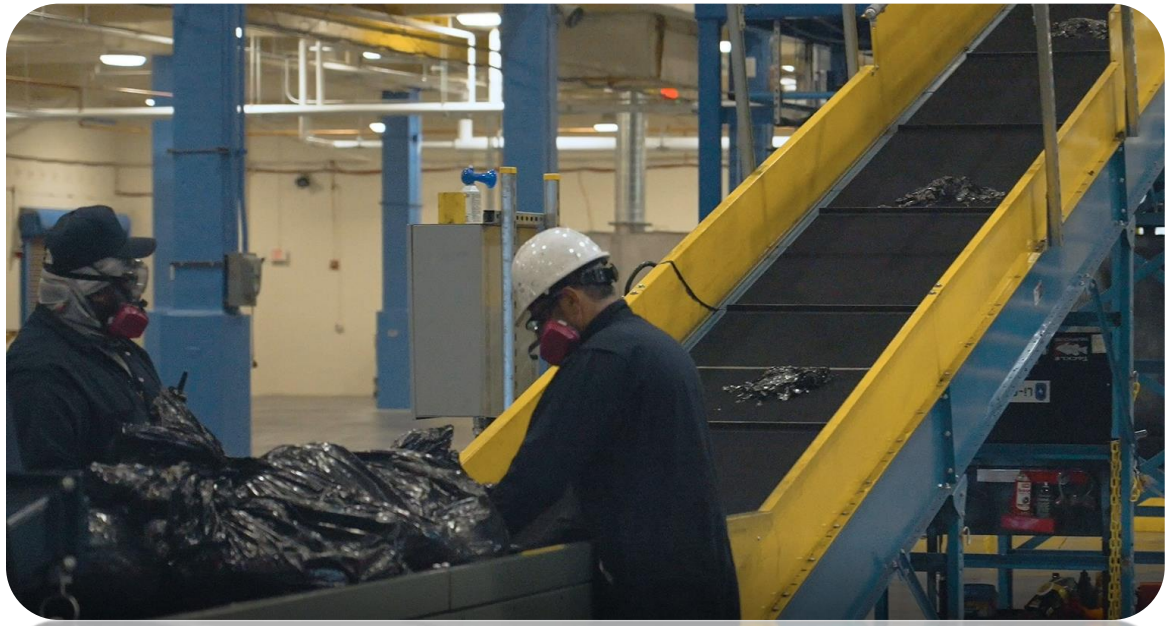
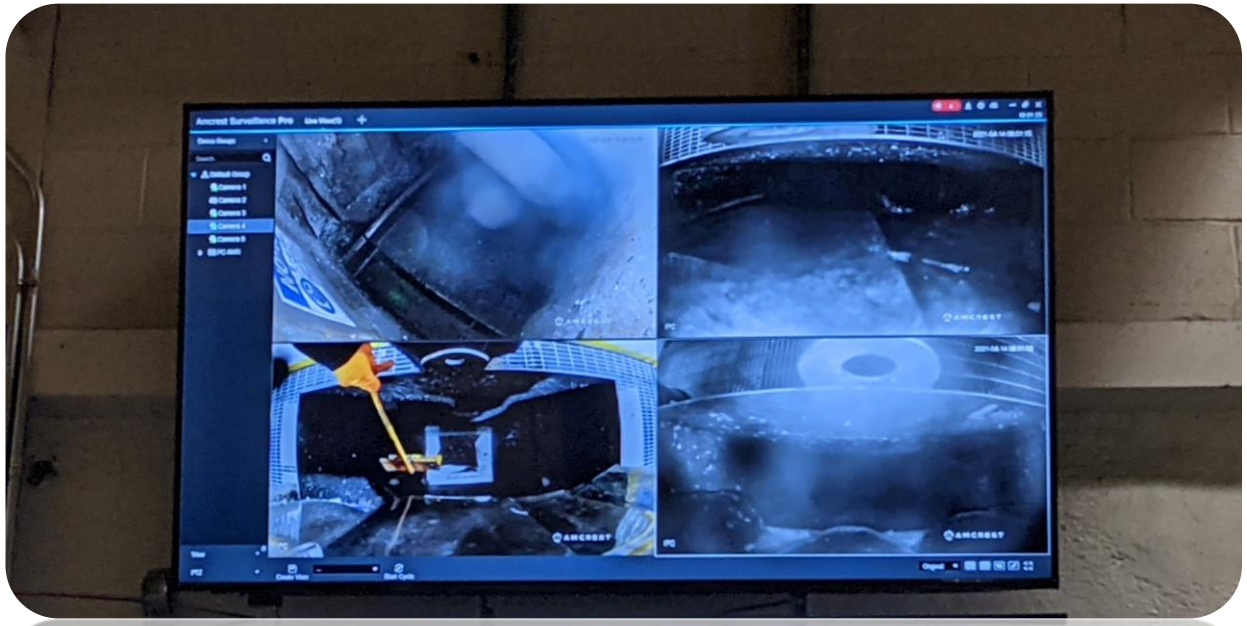
Observations





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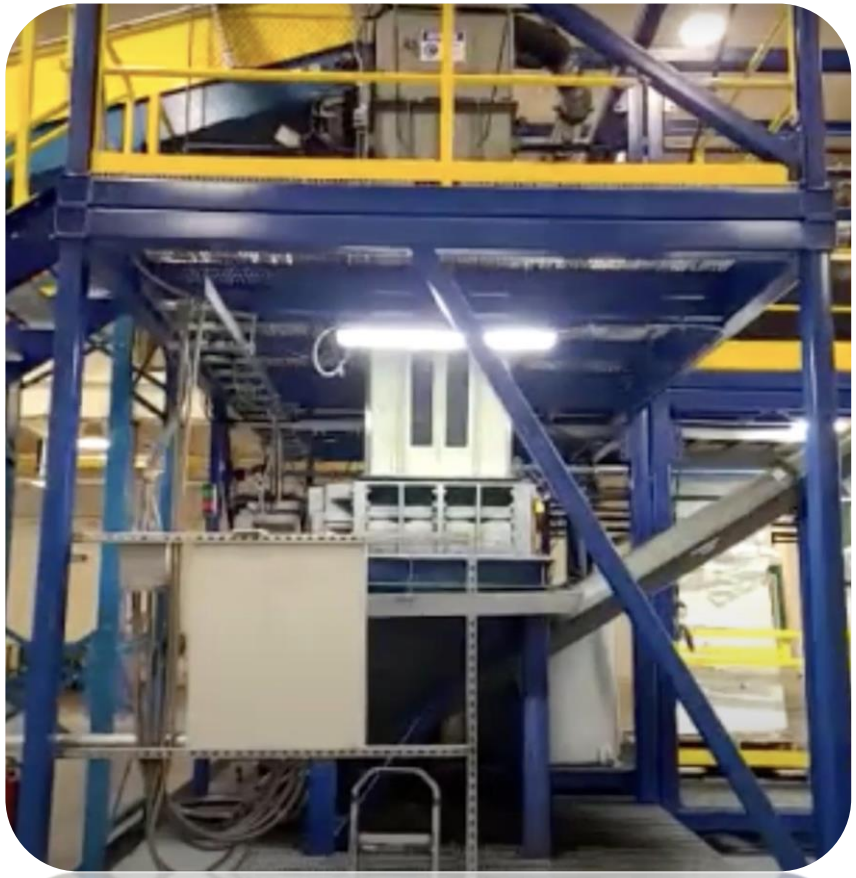
Observations



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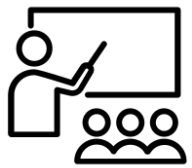
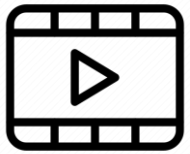
Observations

Trainings include OSHA 10, LOTO, RPP, and Dangerous Goods



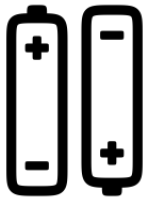
Kodak has an emergency response team for the campus

Safety video for all visitors



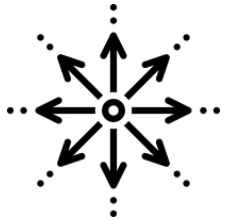
Processing facility is "just-in-time", batteries are not stored there

Batteries that are leaking or venting are processed immediately



Safety inspections conducted

Keep Black Mass product moist to prevent dispersion



Clean floors daily using a floor scrubber

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Documentation Review

Material Assessments

Plastics and metal foils are not hazardous materials

Black mass contains metals and metal oxides

End-products are **not** flammable, pyrophoric, self-heating, or dangerous when wet

End-products determined to be DOT Class 9

IH Assessments

Air sampling showed exposure at or below PELs, but some > TLV and/or REL

Surface sampling showed some accumulation on surfaces

Full-shift noise dosimetry < 85 dBA

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IH Assessments

Table 1: Testing Parameters

Parameter	Analytical Methods
Air Samples and Wipe Samples - 21 Metals Profile - Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper Iron Oxide, Lead, Manganese, Magnesium, Nickel, Potassium, Selenium, Sodium, Thallium, Vanadium, Zinc Oxide	mod. NIOSH 7303; ICP
Personal Noise Exposure – 8-hour work shift, 6:00 AM – 2:30 PM	Casella CEL-350 dBadge personal noise dosimeters

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IH Assessments

Table 2: February 3, 2021 1st Shift (8-Hour) Personal Air Sample Results Cross-Trained Recycling Workers

Analyte Identified (ppm)	Personal Sample 1 for Joel Allen, ID 1901 (mg/m3)	Personal Sample 3 for Joe Ophardt, ID 6000 (mg/m3)	Occupational Exposure Limit (mg/m3) [1]	Sample 1 Ratio	Sample 2 Ratio
Aluminum	ND[4]	ND	NA	NA	NA
Antimony	ND	ND	NA	NA	NA
Arsenic	ND	ND	NA	NA	NA
Barium	ND	ND	NA	NA	NA
Beryllium	ND	ND	NA	NA	NA
Cadmium	ND	ND	NA	NA	NA
Calcium	ND	ND	NA	NA	NA
Chromium	ND	ND	NA	NA	NA
Cobalt	**0.1**	**0.024**	0.1 OSHA PEL 0.05 NIOSH REL 0.02 ACGIH TLV	1	1
Copper	ND	ND	NA	NA	NA
Iron Oxide	ND	ND	NA	NA	NA
Lead	ND	ND	NA	NA	NA
Magnesium	ND	ND	NA	NA	NA
Manganese	**0.097**	**0.015**	5.0 OSHA Ceiling 1.0 NIOSH REL 0.1 ACGIH TLV	0.97	0.15
Nickel	**0.44**	**0.15**	1.0 OSHA PEL 0.015 NIOSH REL 0.2 ACGIH TLV	2.2	0.75
Potassium	ND	ND	NA	NA	NA
Selenium	ND	ND	NA	NA	NA
Sodium	ND	ND	NA	NA	NA
Thallium	ND	ND	NA	NA	NA
Vanadium	ND	ND	NA	NA	NA
Zinc Oxide	ND	ND	NA	NA	NA
Total Ratios [2, 3]				>1	>1
Results February 3, 2021	**Exceeds Occupational Exposure Level**[5]	**Exceeds Occupational Exposure Level**			

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IH Assessments

Table 3 Continued - Wipe Sample Results for Metals

Sample No. and Location	Metals Detected	Result (ug/cm2)	Acceptable Value (ug/cm2) (1)
W5 – 1st floor walkway outside restroom	Aluminum	1.0	100
	Barium	0.25	50
	Cadmium	0.0026	0.5
	Calcium	17	500
	Cobalt	0.37	2
	Copper	0.11	100
	Iron Oxide	8.9	500
	Lead	0.057	3
	Manganese	0.31	10
	Nickel	**2.3**	1.5
	Potassium	0.86	500
	Sodium	31	500
W6 – 2nd Fl north hand rail to mezzanine	Calcium	6.3	500
	Cobalt	0.21	2
	Manganese	0.16	10
	Nickel	**1.1**	1.5
	Potassium	0.65	500
	Sodium	13	500
W7 – 2nd Fl Operator Station 1 Table Top (2)	Calcium	5.4	500
	Cobalt	1.3	2
	Manganese	0.99	10
	Nickel	**6.6**	1.5
	Sodium	14	500

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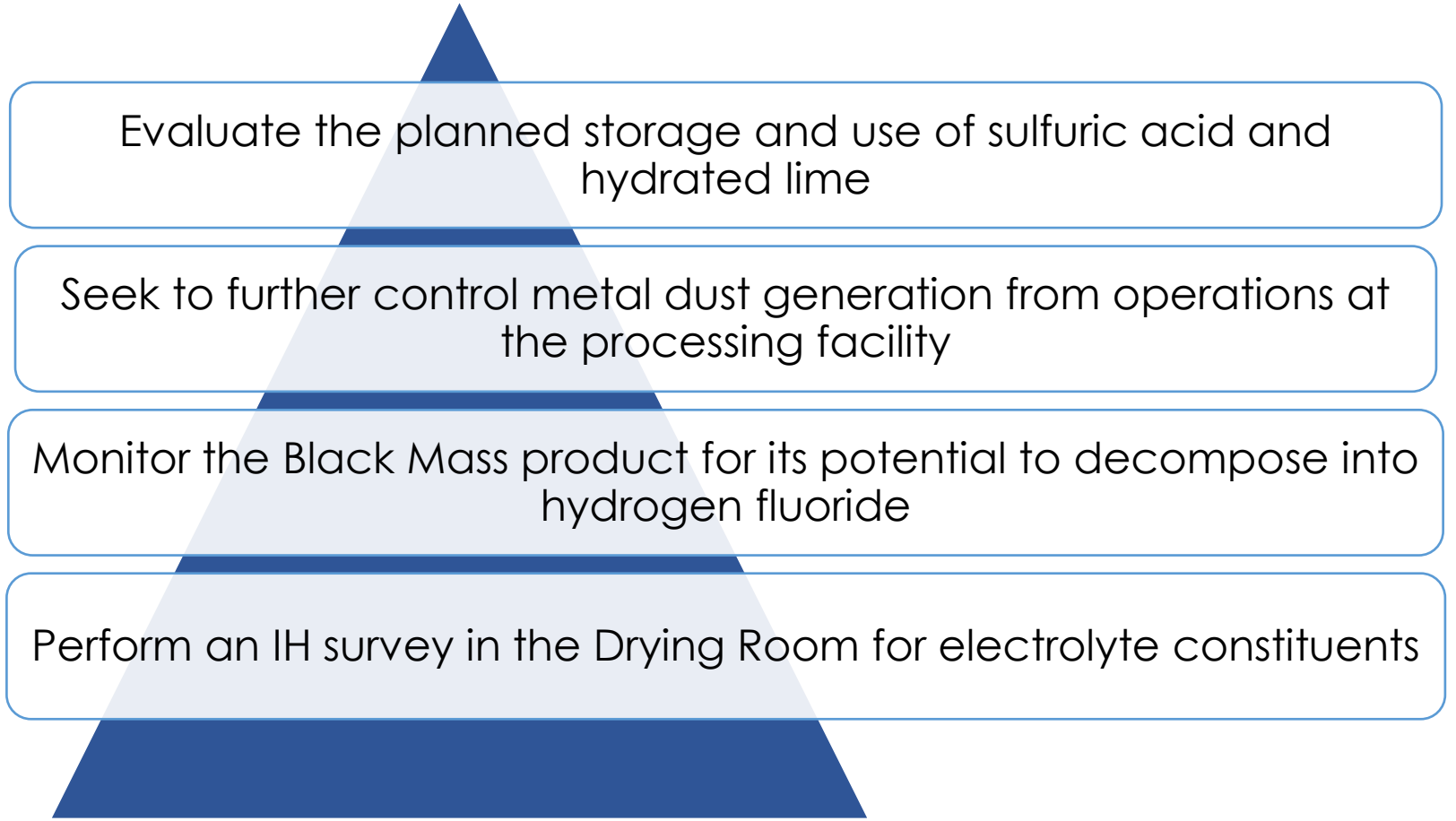
IH Assessments

Table 4 – Li-Cycle Corp. Rochester, NY 14615 Full-Shift Personal Noise Monitoring Results – February 3, 2021

Employee Monitored	Dosimeter Serial Number	Employee Number	Full-Shift TWA Exposure (dBA)	Work Area/Operation
Joel Allen	4938567	1909	78	Staging, Dumping, Monitoring, Spray down filters. Wore respirator.
Kevin Armstrong	4951777	4440	74	Staging, Feeding, Fork-lift operations 60% of time.
Joe Ophardt	4938687	6000	81.7	Shredder / foil operations

Recommendations



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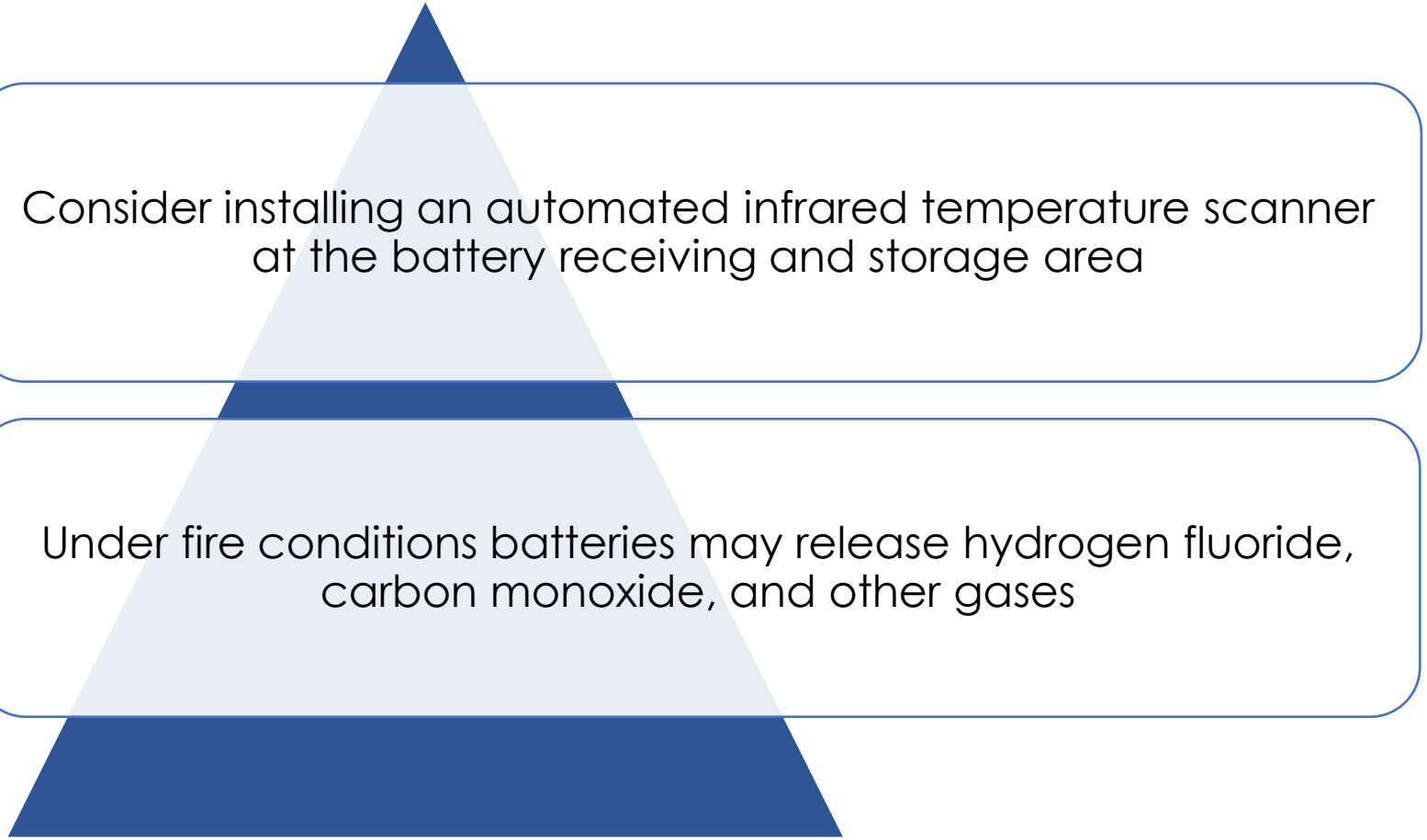
Considerations



The Decision?

To Lease or Not to Lease?

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Contact Information

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