

Yes We Can! A Practical Guide to Aerosol Recycling at MRFs

An educational playbook for Material Recovery Facilities

About RTI International

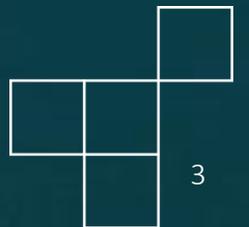
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Introduction to the Playbook

This playbook is designed address some of the risks and concerns MRFs face when considering aerosol can acceptance. It aims to enable informed conversations between MRFs and other stakeholders in the aerosol can supply chain.

The playbook is divided into four main sections outlined below. Case studies from interviews with MRFs across the US can be found in the risks section.

Navigation: Click on the tabs on the left or case study bubbles to move to between sections

Safety-Driven Aerosol Rejector
MRF that does not currently accept aerosol cans for recycling

General Description: As a MRF operator, your primary focuses are safety, operational efficiency, and profit. Currently, we do not accept aerosol cans due to unresolved concerns around risk, both to our staff and equipment, as well as market demand. While we do occasionally use aerosols on the line, we remove them and manage them through alternative disposal methods.

Between the Bin and the Bale: "We've sought someone who recycles and in their line we end and remove aerosols. Our job is to protect our workers and equipment, while defining high quality recyclables. But we don't always see products we're asked to process."

Personas

Use these generalized personas to identify your fit. Explore concerns and potential opportunities around accepting aerosol cans. Understand what other MRFs in similar positions may be asking or considering.

Economic Benefits
MRFs can benefit economically from accepting aerosol cans through increased revenue, reduced disposal costs, and reduced contamination.

Increased Revenue: The steel and aluminum in aerosol cans are valuable commodities. Accepting and properly sorting them can increase revenue for MRFs.

Higher Diversion Rates: Accepting and recycling aerosol cans avoids costly tipping fees.

Reduced Contamination: Contamination in the recycling stream can be costly for MRFs. Accepting empty aerosol cans reduces a clear message, reducing confusion and the likelihood of rejecting processed, secondary aerosol cans.

Benefits

The benefits section provides five main benefits to accepting aerosol cans, both economic and future-proofing benefits.

Risk #1: Safety
How can safety risks of accepting aerosol cans be addressed?

Case Study A: Implementing Prevention and Education Strategies to Safely Accept Aerosols

Key Takeaways: By combining prevention tactics at the facility with high-quality recycling stream with minimal aerosol-related problems, the MRF demonstrates that safely accepting empty aerosols is feasible. When time and resources are limited, targeted outreach specifically to aerosols, their secure handling, and specific campaigns for batteries provides a framework that can be applied if other non-aerosol disposal becomes an issue.

Risks

The risks section contains three main risks to accepting aerosol cans, based on interviews with MRFs across the US. Each risk contains an overview and associated case studies.

Roadmap
What steps can you take towards accepting empty aerosol cans?

Recommendations
For MRFs that either do not accept aerosol cans or do not optimize their acceptance, we recommend four categories of best practices to support safe acceptance, prevention, mitigation, and analysis strategies should be implemented together in order to promote safety and reduce contamination of higher value recycling streams.

Prevention: To prevent safety incidents, work with municipalities to educate businesses on how to properly handle aerosol cans before they reach bins or other collection equipment. This can be done during pre-sorting with manual sorting or increasing sorting equipment like optical sorters, magnets, and/or eddy currents.

Mitigation: Even with strong prevention strategies, safety incidents can still occur. Fire suppression and monitoring systems can help reduce the risk of fire. These systems also address hazards from other emerging risks like batteries or propane cylinders.

Communication: Communication is key to decrease rates of aerosol acceptance. MRFs should work with municipalities to develop outreach materials, such as flyers, brochures, or social media posts, that focus on the highest pricing, offer viable pathways that receive value and avoid tipping fees.

Analysis: Even if premium buyers or local markets are not immediately available, evaluate and pursue alternative outlets for aerosol cans, such as ferrous scrap markets, breakers, or mixed aluminum markets. While these markets may not fetch the highest pricing, they offer viable pathways that receive value and avoid tipping fees.

Roadmap and Recommendations

This section summarizes the benefits and risks in a simple roadmap for MRFs as well as four recommendations based on the case studies presented in the risk section.

About the Aerosol Recycling Initiative

The Aerosol Recycling Initiative, led by the Can Manufacturers Institute (CMI) and Household & Commercial Products Association (HCPA), aims to boost the recycling of empty aerosol cans across the United States by 2030. Its main goals are to ensure that at least 85% of households can recycle aerosols curbside and that at least 90% of aerosol cans are clearly labeled for recycling.

For more information or to get involved, please visit the Aerosol Recycling Initiative at:

<https://www.thehcpa.org/aerosol-recycling-initiative/>



AEROSOL RECYCLING BY 2030

85%

Achieve at least an 85 percent recycling access rate for all aerosol cans.

90%

Label at least 90 percent of all aerosols as recyclable with messaging on how to properly recycle them.

WWW.THEHCPA.ORG/AEROSOL-RECYCLING-INITIATIVE

MRF Personas

How to use the MRF personas:

The following pages show three common types of MRF “personas” when it comes to aerosol can recycling.

Step 1 – Identify your fit

Review each persona and decide which most closely matches your MRF’s current stance and operations. Does your MRF currently accept aerosol cans or not? If you accept empty aerosol cans, do you publicly state acceptance?

Step 2 – Explore the concerns

Each persona lists main concerns. These link to more detail later in the playbook. These sections provide context, examples, and safety considerations you can adapt to your facility. Which of these concerns do you share? Which are not relevant?

Step 3 – Consider the opportunities

Even if your MRF does not currently accept aerosol cans, the “Opportunities” sections show where value could be captured, whether through new end markets, improved safety measures, or operational changes.

Step 4 – Use as a discussion tool

Share the personas with your team to spark conversation about potential next steps. This can help guide internal assessments, investment decisions, or safety planning around aerosol can acceptance.

Personas

Benefits

Risks

Recommendations and Roadmaps



An Aerosol Rejector

MRF that does not currently accept aerosol cans for recycling

1 General Description

As a MRF operator, our primary focuses are safety, operational efficiency, and profit. Currently, we do not accept aerosol cans due to unresolved concerns around risk, both to our staff and equipment, as well as market demand. While we do occasionally see aerosols on the line, we remove them and manage them through alternative disposal methods.

Between the Bin and the Bale

“We’re caught between what residents put in their bins and what end markets demand. Our job is to protect our workers and equipment, while delivering high-quality recyclables, but we don’t design the products we’re asked to process.”

2 Main Concerns

Safety
How do we reduce the risk of aerosol cans starting fires?

End Market Requirements
Are any end markets for aerosol cans profitable for MRFs?

Challenges in Education
How do we educate households on proper disposal?

3 Opportunities

We currently do not accept aerosol cans, largely due to risk from pressurized or non-empty cans. But if we accept aerosol cans, there may be some opportunities:

- We know we will receive aerosol cans regardless of acceptance status. Explicitly accepting aerosol cans means we can educate households on how to properly empty aerosol cans, increasing safety and decreasing risk from pressurized cans.
- Steel and aluminum end markets want aerosol cans. If we explicitly accept aerosol cans, we can sell them to steel end markets for additional revenue.



An Aerosol Rejector

MRF that **does not** currently accept aerosol cans for recycling

General Description

As a MRF operator, our primary focuses are safety, operational efficiency, and profit. Currently, we do not accept aerosol cans due to unresolved concerns around risk, both to our staff and equipment, as well as market demand. While we do occasionally see aerosols on the line, we remove them and manage them through alternative disposal methods.

Between the Bin and the Bale

“We’re caught between what residents put in their bins and what end markets demand. Our job is to protect our workers and equipment, while delivering high-quality recyclables, but we don’t design the products we’re asked to process.”

“

Main Concerns

Safety

How do we reduce the risk of aerosol cans starting fires?

End Market Requirements

Are any end markets for aerosol cans profitable for MRFs?

Challenges in Education

How do we educate households on proper disposal?

Opportunities

We currently do not accept aerosol cans, largely due to risk from pressurized or non-empty cans. But if we accept aerosol cans, there may be some opportunities:

- We know we will receive aerosol cans regardless of acceptance status. Explicitly stating aerosol can acceptance would give us the opportunity to educate households on how to properly empty aerosol cans and where to dispose of non-empty cans, increasing safety and decreasing risk from pressurized cans.
- Steel and aluminum end markets want aerosol cans. If we accept aerosol cans, we can sell them to steel end markets for additional revenue.



A Cautious, Quiet Acceptor

MRF that accepts aerosol cans but does not state acceptance

General Description

We currently accept aerosol cans in our recycling stream, but we don't state aerosol acceptance on our website or publicly shared documents. The volume we receive is manageable, and we haven't experienced any safety issues. For now, we prefer to keep it quiet to avoid a sudden surge in volume or safety risks around improperly prepared cans.

Managing the Tipping Point

"If we do [accept aerosols officially], we may get overwhelmed with them. It could turn into a major problem within our facility."

66

Main Concerns

Safety

How do we reduce the risk of aerosol cans starting fires?

Challenges in Education

How do we educate households on proper disposal?

Opportunities

Our MRF currently accepts aerosol cans, but we don't promote it. Sometimes it's due to differences in municipalities that we serve, but generally we are concerned about increased safety risk if we state acceptance. However, if we explicitly state aerosol can acceptance, there are a few opportunities:

- Explicitly stating acceptance of *empty* aerosol cans will increase safety, presenting the opportunities for us to educate households on how to properly and safely empty and recycle aerosol cans.
- Since we already accept aerosol cans, we could further increase our profits by advertising acceptance and receiving more, properly emptied, aerosol cans.



An Aerosol Acceptor

MRF publicly states empty aerosol can acceptance

General Description

Our MRF has found a balance between safety and profitability by accepting empty aerosol cans. Through simple household education on how to ensure cans are empty and where to bring non-empty ones, we've reduced safety risks from pressurized containers. Empty aerosol cans move into our steel and aluminum streams, providing additional value without major equipment or processing changes. This positions us ahead of emerging EPR requirements and demonstrates that aerosol recycling can be safe, practical, and profitable with the right communication in place.

Keep it Simple, Say Yes

"Aerosol cans end up in the ferrous stream – the ferrous metal goes to facilities...that processes, shreds, and then sends the material off to be made into steel. The facilities we send material to have never had issues with us recycling aerosol cans"

“

Main Concerns

While we accept aerosol cans, we still have a few concerns as the safety of our workers is paramount.

Safety

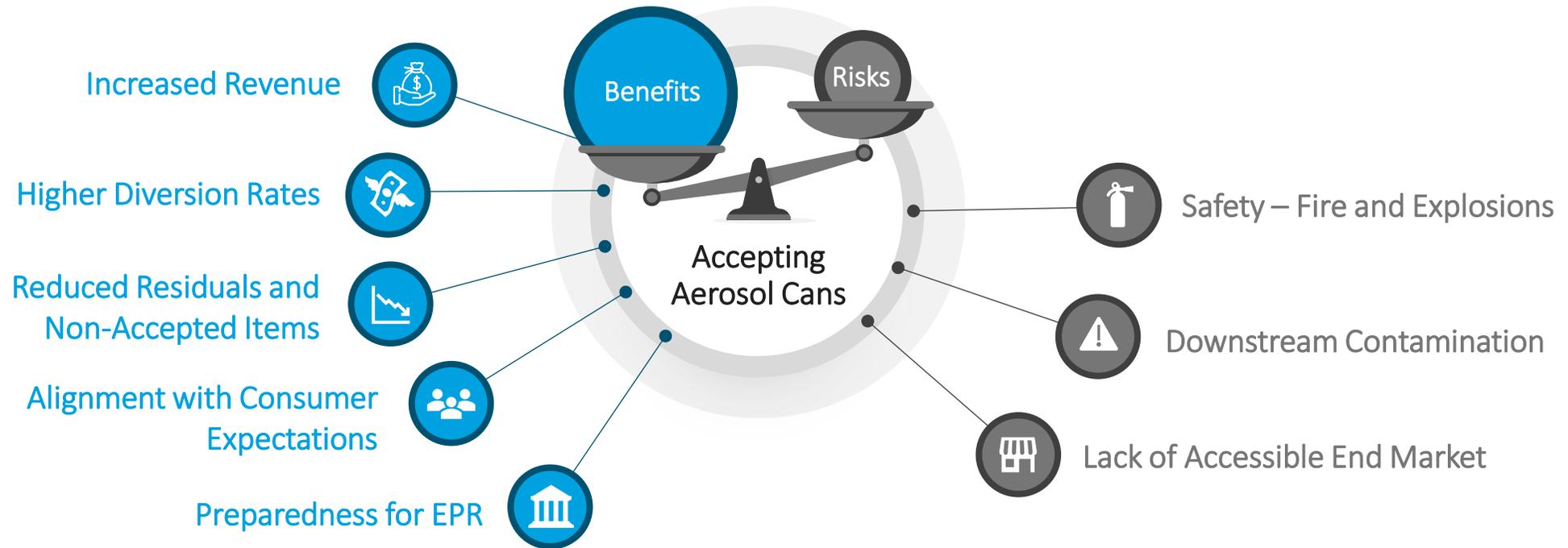
Pressurized aerosol cans can cause explosions or fires. We rely on education to eliminate pressurized cans and separate aerosol cans prior to any compression steps.

Education

Outreach and education is a critical part of safe acceptance of aerosol cans. Educating citizens on how to check if aerosol cans are empty and where to dispose of them if they are not has helped us eliminate explosions and fires from pressurized, non-empty cans.

Benefits to Accepting Aerosol Cans

While there are inherent risks to accepting empty aerosol cans, potential economic and future-proofing benefits may outweigh or even address some of the risks.



Economic Benefits

MRFs can benefit economically from accepting aerosol cans through increased revenue, reduced disposal costs, and reduced contamination.



At a 50% aerosol can recycling rate:

- \$39 million** total annual revenue generated for U.S. MRFs
- \$77,000** approximate additional annual revenue per MRF
- \$8.5 million** in avoided disposal costs/tipping fees

Curious how much revenue aerosols could generate at your MRF? Contact the Aerosol Recycling Initiative!

Source: [Aerosol Recycling Initiative: Propelling Increased Access and Improved Labeling](#)

Increased Revenue



The steel and aluminum in aerosol cans are valuable commodities. Accepting and properly sorting them can increase revenue for MRFs.

Higher Diversion Rates



Accepting and recycling aerosol cans avoids costly tipping fees.

Reduced Residuals and Non-Accepted Items



Contamination in the recycling stream can be costly for MRFs. Accepting empty aerosols gives residents a clear message, reducing confusion and the likelihood of receiving pressurized, non-empty aerosol cans.



Future-Proofing Benefits

In addition to economic benefits, MRFs that accept aerosol cans can get ahead of pending EPR legislation and consumer expectations.

Consumers are starting to prioritize sustainable and recyclable packaging:

52%

of [consumers](#) in the U.S. associate metal packaging with recyclability

78%

of [consumers](#) already look at packaging for recycling directions.

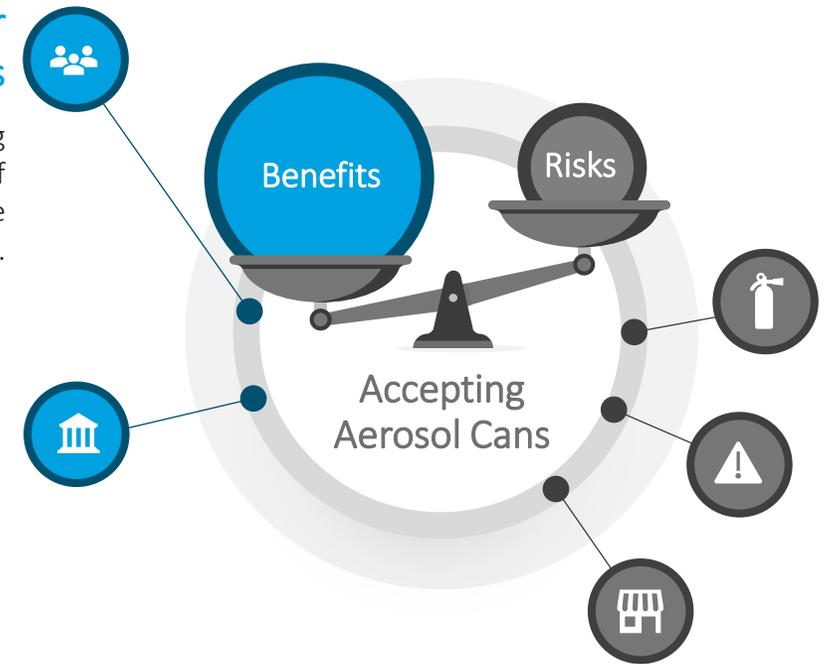
These statistics indicate most consumers may put aerosol cans in the recycling if packaging indicates they are recyclable. Accepting aerosol cans will ensure MRFs and their partner communities can educate these consumers on how to properly empty and recycle aerosol cans.

Alignment with Consumer Expectations

Consumers and municipalities are becoming increasingly aware and supportive of sustainable packaging. This is leading to more legislation on packaging and recycling.

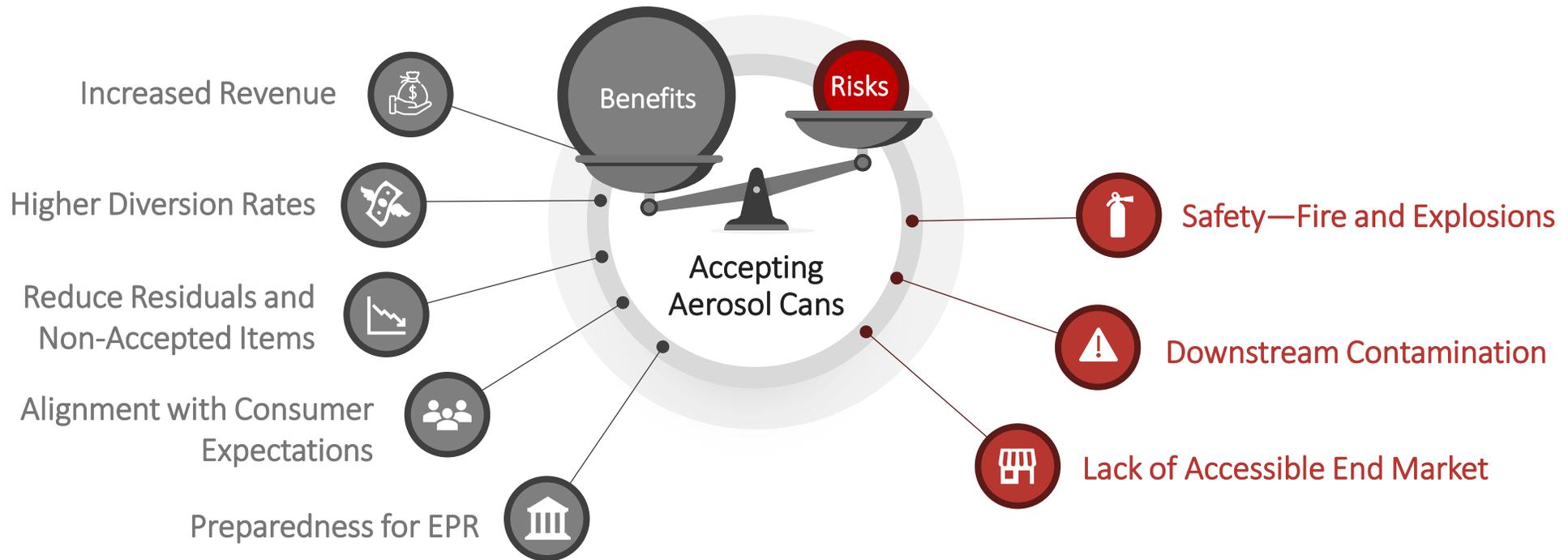
Preparedness for EPR

By accepting empty aerosol cans now, MRFs can get ahead of pending Extended Producer Responsibility (EPR) legislation, which will mandate MRFs to accept materials designated on the recyclable materials list, including aerosol cans.



Risks to Accepting Aerosol Cans

Accepting empty aerosol cans comes with a range of both risks and benefits. Safety, contamination, and end-market risks pose significant but not insurmountable challenges for MRFs considering accepting aerosol cans.



Risks to Accepting Aerosol Cans

This section describes three main risks to accepting aerosol cans identified from interviews with MRFs across the US. Each risk contains an overview and case studies of MRFs addressing the risk.

Risk #1: Safety



Aerosol cans, particularly when not properly emptied, can cause fires or explosions that put workers at risk and damage equipment.

Staff Safety

Potential for injury or exposure to hazardous materials from non-empty cans from fire, explosion, or chemical release.

Equipment Damage

Non-empty cans could explode during processing (e.g., crushing, baling), potentially damaging the shredding or baling equipment.

Operational Disruption

Incidents (e.g., fires, explosions) may cause facility shutdowns or slowdowns, disrupting processing schedules and reducing throughput.

Risk #2: Downstream Contamination



Aerosol cans can be viewed as contaminants in other metal streams.

Some end markets view aerosol cans as contaminants due to safety concerns around receiving pressurized containers, so they often rely on puncturing to ensure all cans are depressurized and safe to process. Used beverage can (UBC) end markets may also reject bales containing aerosol cans, even when they are drained and punctured. The possibility of bale rejection creates concern among MRFs about needing added processing steps or equipment to remove and process aerosol cans.

Rejection of any aerosol can, regardless of contents or pressurization, is mainly a precaution driven by risks associated with non-empty aerosol cans.

Risk #3: Lack of Accessible End Market



There may not be buyers for aerosols or bales containing aerosol cans.

Difficulty securing a buyer for recycled aerosols may result in additional storage or disposal costs and ultimately profit loss.

Risk #1: Safety

Overview

Case Study A

Case Study B

Case Study C

How can safety risks of accepting aerosol cans be addressed?

Prevention: Minimize the likelihood of fire and/or explosions by implementing procedures for material acceptance, inspection, and safe handling of aerosols. This does not necessarily require additional equipment.

Examples:

- Training staff on the container lines to manually sort non-empty aerosol cans .

Mitigation: Reduce the severity of incidents by preparing the facility and staff to manage fires and explosions.

Example:

- Implement fire suppression systems (e.g., Fire Rover), which can remotely identify/address fire incidents.

Communication: Develop proactive education for residents to ensure safe material acceptance, and for staff to ensure safe handling of aerosols.

Examples:

- Develop clear acceptance criteria (e.g., only empty cans) and work with municipalities to implement resident education campaigns on proper disposal of aerosol cans.
- Provide safety training to MRF staff on aerosol protocols.

Analysis: Continuously monitor and track incidents to drive improvements in aerosol handling processes.

Examples:

- Maintain a safety incident tracking system to log fires, explosions, and near-misses related to aerosols.
- Conduct root cause analyses of fires or explosions to understand the initial ignition source. Aerosol cans may be present at, but not the cause of, a fire.
- Analyze contamination rates to identify patterns of improper aerosol disposal.

“Safety is prioritized over material quality and productivity at [our] facilities. Past incidents have resulted in equipment damage and injuries from aerosol cans combusting or exploding in balers...We can’t accept aerosols because the risk of fire or explosion is just too high.”

– Company operating multiple MRFs

“Over the nearly 31 years the MRF has been operating, we may have had a couple of instances where a can containing material made it to the baler and caused an insignificant, short-lived fire but those instances have been significantly less than issues we’ve had with batteries over recent years.”

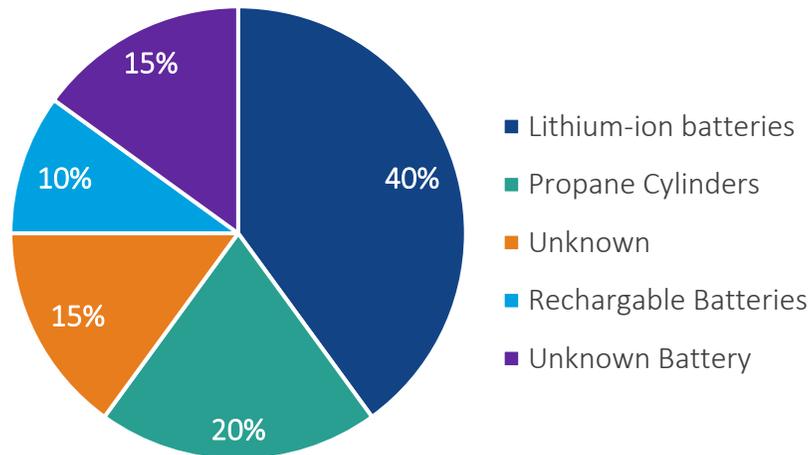
– MRF in Michigan

Risk #1: Safety

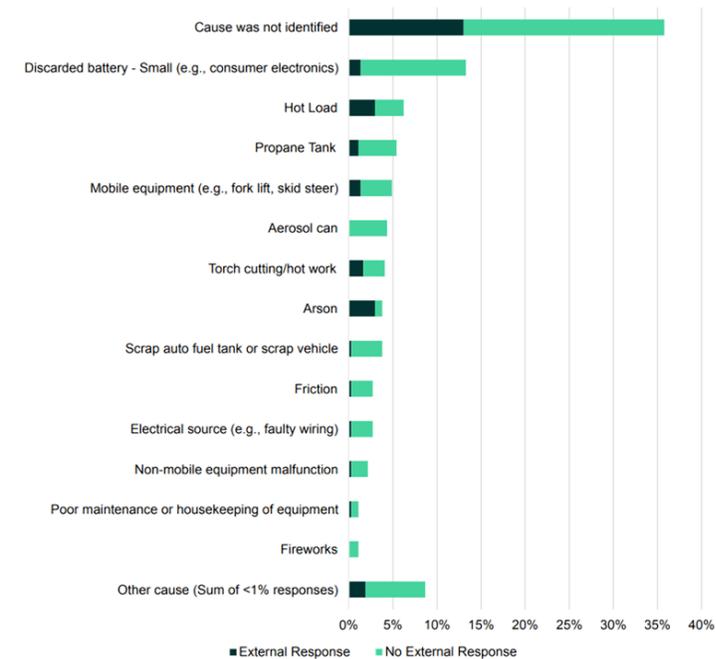
[Overview](#)
[Case Study A](#)
[Case Study B](#)
[Case Study C](#)

How can safety risks of accepting aerosol cans be addressed?

Multiple data sources confirm that, although fires and explosions from aerosol containers occur at MRFs, they pose a lower risk than other materials. Lithium-ion batteries and propane tanks are more frequent and severe sources of fire incidents.



A 2018 study by the [California Product Stewardship Council](#) noted that combustibles, including aerosols and butane cans, were a reported source of fire. However, most fires reported by MRFs were caused by batteries, not aerosol cans. Aerosol cans may fall under the 15% of unknown causes.



A 2025 [EREF](#) report surveyed MRFs, transfer stations, and metal recyclers across the United States on fires within the last 3–5 years. Only 5% of MRFs reported that fires were caused by aerosol cans, and none required an external response.

Risk #1: Safety

[Overview](#)
[Case Study A](#)
[Case Study B](#)
[Case Study C](#)

Case Study A: Prevention and Education Strategies for Safe Acceptance

Overview

Aerosol acceptance: Yes

Strategy: Implementing prevention and education strategies to safely accept empty aerosol cans

Outcomes: High-quality recycling stream with minimal aerosol-related problems

An MRF in the Midwest is proactively addressing safety risks associated with accepting aerosol cans by integrating prevention and education strategies. Committed to maximizing the variety and volume of materials they recycle, the facility has always accepted aerosol cans but recognized the inherent risks of fire and explosions, especially during baling and compacting, when non-empty cans could ignite or explode.

Prevention Strategy: Manual Presorting

To minimize these risks, the MRF has integrated aerosol sorting into existing sorting strategies. Two employees are stationed at manual sorting lines; one of their tasks is to remove non-empty aerosol cans to prevent them from being compressed in the baler. This proactive separation reduces the likelihood of fires or explosions downstream.

Communication Strategy: Targeted Public Education Campaigns

In partnership with city and state governments, the MRF runs targeted public awareness campaigns via social media and bus-stop advertisements. Previous efforts that broadly encouraged proper recycling had little impact. However, when the campaigns focused on specific problematic materials, like batteries, the facility saw a decrease in these materials. Although the MRF has not needed to deploy a similar campaign for aerosols, this targeted communication approach could be implemented if improper aerosol disposal becomes a recurring issue.

Key Takeaways

By pairing strong in-facility prevention practices with a proven public education strategy, this MRF demonstrates that safely accepting empty aerosol cans is both practical and low-cost. The facility did not need to install new equipment or modify its processing line; non-empty cans are removed with other contaminants before baling. Although dedicated aerosol outreach has not yet been necessary, the MRF's success with targeted campaigns for batteries offers a ready framework if improper aerosol disposal becomes a concern.

Risk #1: Safety

[Overview](#)
[Case Study A](#)
[Case Study B](#)
[Case Study C](#)

Case Study B: Leveraging Fire-Suppression Technology

Overview

Aerosol acceptance: Yes, but not stated

Strategy: Leveraging fire-suppression technology

Outcomes: Have not experienced fire-related incidents associated with aerosols

Fires within MRF equipment, like balers, can escalate quickly, leading to equipment damage, facility shutdowns, and worker safety risks. Although aerosol cans are not the primary cause of fires, they can contribute to ignition incidents if not properly managed. Detecting and suppressing fires early is critical to mitigating operational disruptions.

A MRF in Utah invested in a Fire Rover fire-detection and -suppression system as part of a broader strategy to improve fire safety. The system uses infrared cameras to detect heat signatures, including within equipment, and deploys targeted suppression to extinguish fires quickly.

Although the system was not installed specifically for aerosols, it provides an added layer of confidence for the MRF. Since installation, the MRF has not experienced significant fire-related incidents associated with aerosols.

Key Takeaways



Implementing facility-wide risk mitigation strategies, such as advanced fire-detection and suppression systems, can enhance a MRF's ability to manage fire risks.

Risk #1: Safety

[Overview](#)
[Case Study A](#)
[Case Study B](#)
[Case Study C](#)

Case Study C: Using Data and Messaging to Support Safe Recycling

Overview

Aerosol acceptance: Yes

Strategy: Communication and analysis, in collaboration with the Aerosol Recycling Initiative

Outcomes: Identified main product types for aerosol containers and residual content

The Aerosol Recycling Initiative (The Initiative) is collaborating with Circular Action Alliance (CAA) and the Portland, Oregon metropolitan area to address safety concerns and promote empty aerosol can recycling. The effort focuses on **two strategies, analysis and communication**, to help MRFs reduce risk and gain measurable insight into aerosol can recycling.

Analysis Strategy: Collaborative Characterization

The Initiative collaborated with a Portland-area MRF to characterize aerosol cans in the recycling stream. The wanted high quality, quantitative data on their aerosol recycling stream. The MRF noted that understanding what is in their stream would help them ensure their handling materials correctly and not exposing workers to potential hazards. The information will help the MRF continue safely accepting empty aerosol cans or make intentional changes.

The Initiative examined product type, packaging material, and residual content, giving the MRF quantitative insight into its aerosol stream and safety profile. Most of the aerosol cans were household, personal care, or food-related products rather than hazardous materials. The results provide a baseline for tracking safety improvements over time.

[Continued on Next Page](#)

Key Takeaways



Partnering on data collection and public education enables MRFs to make informed safety decisions around accepting empty aerosol cans. The collaboration between the Aerosol Recycling Initiative, CAA, the Portland Metro region and MRFs provides a model for reducing safety concerns via quantitative data collection and analysis and supporting consistent, safe recycling practices at the curbside.

Risk #1: Safety

Overview

Case Study A

Case Study B

Case Study C

Case Study C: Using Data and Messaging to Support Safe Recycling

Overview

Aerosol acceptance: Yes

Strategy: Communication and analysis, in collaboration with the Aerosol Recycling Initiative

Outcomes: Identified main product types for aerosol containers and residual content

Continued from Previous Page

In parallel with their analysis of the aerosol cans in the recycling stream, The Initiative developed simple public messaging for the Portland Metro area. The goal of this messaging was to teach households how to properly check if their aerosol is empty and where to bring their aerosol cans if they are not empty.

Communication Strategy: Simple Public Messaging

The Initiative is supporting household messaging across the Portland Metro area to help residents recycle aerosol cans safely. The campaign instructs residents on how to check if cans are empty and where to take them if they are not, helping reduce residual or hazardous products in curbside recycling. The clear and simple three step messaging (see example on the right) has been well received on social media. Future analysis will quantify whether this outreach lowers the number of non-empty or hazardous aerosols entering facilities.

HOW TO RECYCLE EMPTY AEROSOL CANS

Press It
There should be no "hissing" sound and nothing should come out.

Shake It
You should not feel liquid moving inside.

Recycle It
Empty cans belong in your recycle bin.

If it's not empty, use it up or take it to your local household hazardous waste facility at:

Metro Central 6161 NW 61st Ave Portland, OR 97210 HOURS: 9am-4pm Mon-Sat	or	Metro South 2001 Washington St Oregon City, OR 97045 HOURS: 9am-4pm Every Day
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Recycling questions? Ask Metro
AskMetro@oregonmetro.gov
503-234-3000

Risk #2: Downstream Contamination

Overview

Case Study D

How can end markets' concern around contamination be addressed?

The risk of contamination from aerosol cans is two-fold:

- **Metal contamination** – Mixing any steel and aluminum cans, including aerosol cans, into the wrong scrap stream leads to impurities and can affect downstream processing for end markets
- **Contamination from non-empty aerosols** - Non-empty aerosols may contain residual contents, posing safety risks to MRFs and buyers, leading to potential rejection from end markets.

The following are example solutions that MRFs can leverage to both prevent and mitigate issues with contamination:

“Mills don’t accept aerosols, I think it has to do with the flammability...they can reject an entire load if they see even one aerosol in a bale...mills have strict quality requirements, and the risk of load rejection is high if aerosols are found mixed with other metals”

– MRF in Iowa

Solution Type	Solution	Examples
Prevention Stop contamination before it enters the system	Prevent contamination by setting clear acceptance guidelines and ensuring aerosols are properly sorted.	<ul style="list-style-type: none"> • Work with municipalities to define and communicate acceptance criteria and get the word out to residents. • Educate residents on how to empty aerosol cans and where non-empty cans can be disposed.
Mitigation Reduce impact if contamination does occur	Reduce the impact of contamination through equipment upgrades and quality control processes.	<ul style="list-style-type: none"> • Install manual sorting stations at the front-end to intercept non-empty aerosols. • Leverage or upgrade equipment (e.g., magnets for steel aerosols, eddy current for aluminum aerosols) to support enhanced sorting.
Communication	Maintain ongoing communication downstream (e.g., end market buyers) and upstream (e.g., municipalities, consumers).	<ul style="list-style-type: none"> • Work with processors to define acceptable contamination thresholds. • Educate residents on how to properly dispose of non-empty and broken cans.
Analyze	Monitor contamination trends, evaluate processes, and use data to inform operational adjustments.	<ul style="list-style-type: none"> • Conduct bale audits to track contamination trends and adjust operations as needed. • Conduct root cause analysis when contamination thresholds are exceeded.

Risk #2: Downstream Contamination

Overview

Case Study D

Case Study D: Targeted Education to Prevent Downstream Contamination

Overview

Aerosol acceptance: Yes

Strategy: Proactive resident education and outreach

Outcomes: Strong relationships with their end market

Downstream contamination from improperly sorted materials, like non-empty or non-accepted aerosol cans, can jeopardize the quality of metal streams, leading to bale rejection or lower market value from end markets.

An Oklahoma-based MRF has mitigated downstream contamination risks through targeted resident education and outreach. Understanding that effective recycling starts at the curb, the MRF employs a **multi-generational outreach approach**, combining videos, social media, website resources, and hands-on learning opportunities.

For aerosol cans, **in-person outreach** has proven most effective. The MRF conducts demonstrations at community events, showing residents how to ensure cans are empty and educating them on which types of aerosol products are accepted. They maintain a simple message for items they accept, and it applies to aerosols as well: only items from the kitchen, bath, and laundry are accepted, not those from the garage or shed, where hazardous contents are more common.

This proactive communication has reassured the MRF's downstream buyers that their bales meet quality specifications, maintaining strong relationships with their end market.

Key Takeaways



Proactive resident education reduces the risk of non-accepted aerosols (in this case, non-empty aerosols, or those from the garage or shed) entering the recycling stream. Additionally, proactive education reassures end markets that bales will meet quality specs and limit potential safety incidents from non-empty aerosols.

Risk #3: Challenges Identifying End Markets

Overview

Case Study E

Case Study F

What financially viable end markets exist for aerosol cans?

Even after addressing safety concerns, many MRFs might still wonder whether collecting aerosol cans makes financial sense. The good news is that end markets do exist, and when the cans are properly sorted and emptied, they can be a valuable source of aluminum and steel. Some MRFs have found that, with the right buyer relationships and volume, aerosol cans can contribute to overall revenue. End-market opportunities depend on can material.

Steel Aerosol Cans

- **Are empty steel aerosol cans accepted by end markets?** Yes, steel aerosol cans are readily accepted by end markets. One [study](#) notes, "There are no penalties, price downgrades, or rejections for steel bales that contain aerosols."
- **What are the end markets for empty steel aerosol cans?**
 - Brokers and scrap managers are the predominant end market for MRF steel bales, where the material is further processed before being sold to steel mills.
 - Steel aerosols can also be incorporated into bulk ferrous metal scrap.
- **What are examples of end markets that accept steel aerosol cans?**
 - Nucor, US Steel, and AMG Resources

Aluminum Aerosol Cans

- **Are empty aluminum aerosol cans accepted by end markets?** Aluminum aerosol cans are not as easily accepted by end markets because of concerns about plastic and steel contamination. Sheet mills will not accept aluminum aerosol cans, but scrap dealers, deox producers, and intermediary processors will accept aerosols as part of mixed aluminum bales.
- **What are the end markets for empty aluminum aerosol cans?** MRFs can sell empty aluminum aerosol cans as part of mixed aluminum bales. These bales are typically accepted by secondary markets, including scrap dealers, deox producers, and intermediary processors.
- **What are examples of end markets that accept aluminum aerosol cans?**
 - Remelt scrap ingot producers (e.g., Real Alloy) and deox producers (e.g., Gottlieb)

”

"If there is a way for a profit or profit margin, the MRF will chase it. There is a lot of smart people that run these facilities and if there was a good end market for aerosols, people would start accepting them and advertise it. But right now, there is no good outlet for them, or at least we aren't educated on it."

- MRF in Iowa

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"Aerosol cans [we receive] end up in the ferrous stream...the ferrous metal goes to facilities in Salt Lake that processes, shreds, and sends them to another facility where they are made into steel. They've never had issues with aerosol cans in the ferrous bales."

- MRF in Utah

Risk #3: Challenges Identifying End Markets

[Overview](#)
[Case Study E](#)
[Case Study F](#)

Case Study E: Incorporating Aerosol Cans into Ferrous Metal Streams

Overview

Aerosol acceptance: Yes, not stated

Strategy: Incorporating aerosol cans into their ferrous metal streams

Outcomes: Quality recycling output accepted by end markets

Many MRFs hesitate to accept aerosol cans due to concerns about the lack of viable and financially sustainable end markets.

A publicly operated MRF in Utah has developed a strategy for managing aerosol cans by incorporating them into their existing ferrous metal scrap stream. While there are markets for higher quality steel, the MRF finds it more efficient to combine aerosol cans with other ferrous scrap materials, which are then sent to a secondary processor for further handling before reaching a steel mill.

This approach leverages existing downstream relationships, ensuring aerosols are recycled. While this approach may not be as high value as recycling aerosols in other ferrous streams, it still allows the MRF to profit from aerosol cans. On average in the US, mixed scrap ferrous metal typically sells for **\$330 per ton** (as of 2025), however, this is generally industrial scrap. Prime industrial ferrous scrap averages about \$425 per ton. Steel cans, most likely where aerosol cans end up are currently at \$158.13 a ton as of August 2025.

Key Takeaways



MRFs can successfully incorporate aerosols into ferrous metal streams and utilize existing processor relationships to ensure marketability. The aluminum and steel in empty aerosol cans are valuable metals if properly sorted.

Risk #3: Challenges Identifying End Markets

[Overview](#)
[Case Study E](#)
[Case Study F](#)

Case Study F: Leveraging Multiple End Markets Based on Material Type

Overview

Aerosol acceptance: Yes

Strategy: Manually sorts aerosol cans into two streams: steel aerosols into steel can bales and aluminum aerosol into mixed aluminum bales.

Outcomes: Quality recycling output accepted by end markets

A barrier to MRFs accepting aerosol cans is the challenge in identifying consistent end markets especially for aluminum aerosol cans. Aluminum aerosol cans often contain plastic or steel components like springs. Steel is a contaminant in aluminum recycling but relatively easy to remove after shredding or melting. Mills and foundries do not want plastic, but for secondary processors making remelt secondary ingot (RSI) or deox, plastics are not a concern. Recognizing the need to maintain the quality of UBC bales, a company operating multiple MRFs on the West Coast manually separates aerosol cans during processing.

Sorted steel aerosol cans are incorporated into steel can bales, while aluminum aerosol cans are directed into mixed aluminum bales. The company has processors and smelters that accept these bales.

By segregating aerosols from high-value UBC streams and aligning them with end markets that process mixed materials, the company has created a reliable system for managing both steel and aluminum aerosols without disrupting material quality standards for UBCs.

Key Takeaways

MRFs can mitigate end market challenges for aerosol cans by leveraging multiple end markets based on material type. Manual sort station and automated sorting processes (i.e., magnets to pull out steel aerosol cans and eddy currents for aluminum aerosols) enable MRFs to place these materials into appropriate commodity streams while preserving the value of high-value streams like UBC.

Recommendations

For MRFs that either do not accept aerosol cans or do not publicize their acceptance, we recommend four categories of best practices to support safe acceptance. **Prevention, mitigation, communication,** and **analysis** strategies should be implemented together to promote safety and reduce contamination of higher value recycling streams.

Prevention



To prevent safety incidents, work with municipalities to educate citizens on how to properly empty cans. MRFs can also remove non-empty aerosol cans before they reach balers or other compression equipment. This can be done during pre-sorting with manual stations or leveraging existing equipment like optical sorters, magnets (steel), or eddy currents (aluminum).
See Case Studies A and D

Mitigation



Even with strong prevention strategies, safety incidents can still occur. Fire suppression and monitoring systems can limit damage, protect equipment and personnel, and support root-cause analysis after an event. These systems also address hazards from other emerging risks like batteries or propane cylinders.
See Case Study B

Communication



Communication is key to decrease risks of aerosol acceptance. MRFs should work with municipalities to proactively educate households with clear, simple messaging on how to empty aerosol cans and where to dispose of non-empty cans. Test different communication methods and tailor outreach to local audiences.
See Case Studies C and D

Analysis



Even if premium buyers or local markets are not immediately available, evaluate and pursue alternative outlets for aerosol cans, such as ferrous scrap markets, brokers, or mixed aluminum markets. While these markets may not fetch the highest pricing, they offer viable pathways that recover value and avoid tipping fees.
See Case Studies C, E, and F

Roadmaps

What steps can you take towards accepting empty aerosol cans?



An Aerosol Rejector

For MRFs that do not accept aerosol cans

Evaluate and Identify

How are aerosols currently handled if they are received? Where are they sorted, and what is their end of life? In the existing process to sort aerosols, where are there safety issues? What procedure changes could prevent aerosols from causing accidents prior to this step?

What end markets are willing to accept aerosol cans? Consider out-of-state.

Pilot-Testing

Test new processes before advertising acceptance. For example, explore a process to ensure aluminum aerosols are placed in MALUM bales. Track safety incidents during this process. For assistance studying or tracking aerosol cans received, contact the [Aerosol Recycling Initiative](#).

Outreach

Collaborate with municipalities on outreach that educates households on the importance of emptying cans and where to dispose of non-empty aerosols.



A Cautious, Quiet Acceptor Roadmap

For MRFs that do not state aerosol acceptance

Outreach

Work with municipalities on messaging around aerosol acceptance. Any communication of aerosol acceptance should be done in parallel with educational outreach that teaches households how to check if aerosol cans are empty and where to dispose of aerosol cans that still contain contents. For assistance with messaging, contact the [Aerosol Recycling Initiative](#).

Analysis

Monitor the impact of aerosol can outreach. Has the volume of aerosol cans increased? What portion of the aerosol cans received are empty?

Glossary

Communication	Strategies to educate or outreach to other stakeholders
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CMI	Can Manufacturers Institute
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End Markets	Stakeholders that purchase materials, including aerosol cans, from MRFs
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EPR	Extended producer responsibility
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HCPA	Household and Commercial Products Association
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MALUM	Mixed aluminum
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Mitigation	Strategies to reduce the impact of risks if they do occur
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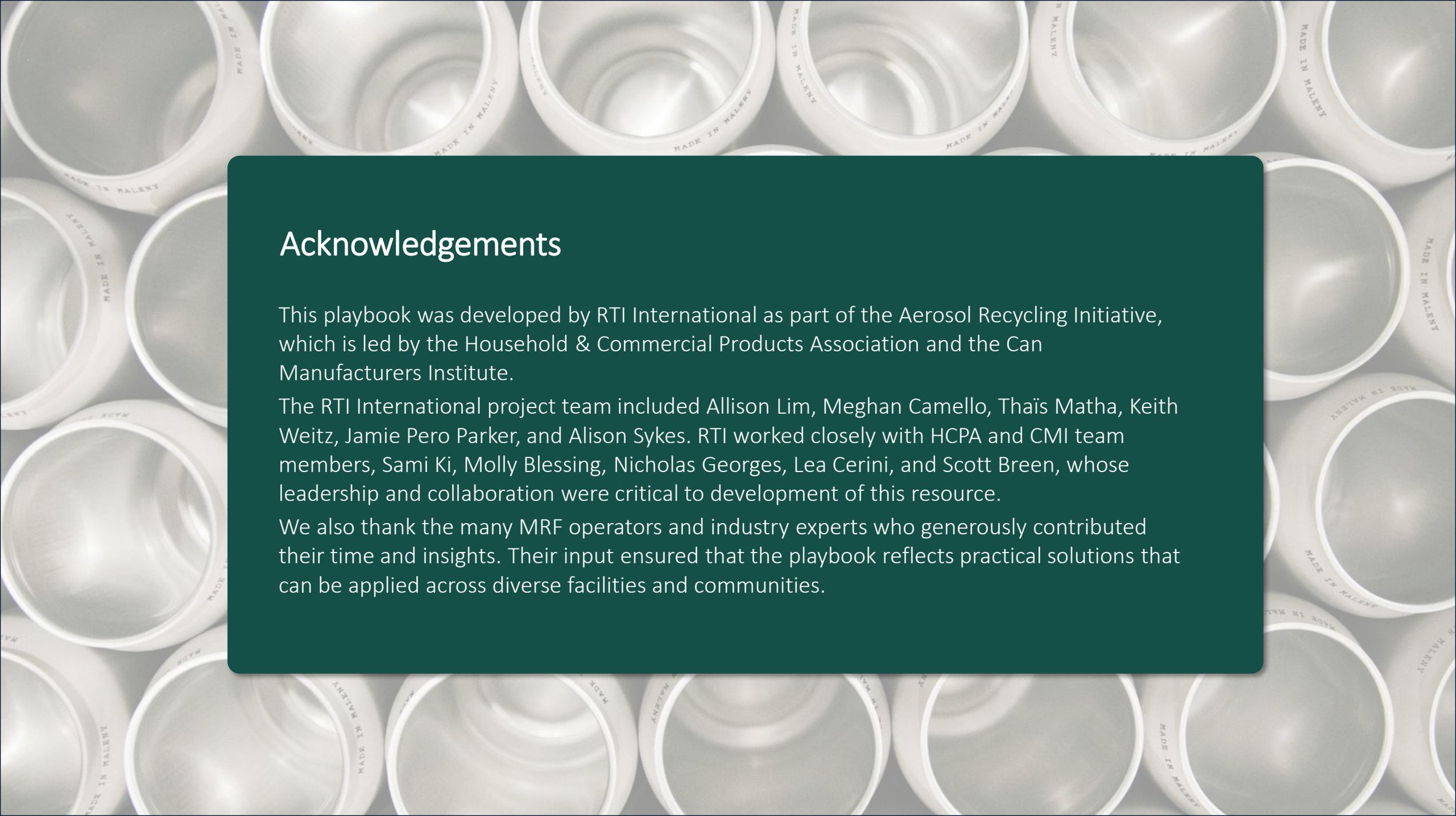
MRF	Material recovery facility
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Prevention	Strategies to stop risks from occurring
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UBC	Used beverage cans
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Resources

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Acknowledgements

This playbook was developed by RTI International as part of the Aerosol Recycling Initiative, which is led by the Household & Commercial Products Association and the Can Manufacturers Institute.

The RTI International project team included Allison Lim, Meghan Camello, Thaïs Matha, Keith Weitz, Jamie Pero Parker, and Alison Sykes. RTI worked closely with HCPA and CMI team members, Sami Ki, Molly Blessing, Nicholas Georges, Lea Cerini, and Scott Breen, whose leadership and collaboration were critical to development of this resource.

We also thank the many MRF operators and industry experts who generously contributed their time and insights. Their input ensured that the playbook reflects practical solutions that can be applied across diverse facilities and communities.