

INSIGHT & EXPERIENCE: MANAGING OVERSTOCK AND MITIGATING RISK

Supplying Safe, Sustainable Solutions for the Disposal
& Recycling of Hand Sanitizer Amid Pandemic



Hand sanitizer made by nontraditional or international manufacturers that does not meet Food and Drug Administration (FDA) regulations lack a sustainable alternative use or recycling solution. With the onset of COVID-19, retailers experienced a lack of hand sanitizer on the shelves, leading to overproduction and a flood of products into the marketplace with a set shelf life. Across multiple customers, including a large home improvement retailer, Fullcircle™, Clean Earth's Advanced Waste Lifecycle Program, provided an environmental innovation to keep waste generation ahead of the curve.



ALTERNATIVE REUSE SOLUTIONING FOR 1.1 MILLION POUNDS OF NON-VIABLE HAND SANITIZER

The global pandemic created many challenges for companies, but also a new opportunity to meet the exponentially growing demand of an essential product: hand sanitizer. Prior to COVID-19, the hand sanitizer market was niche, reserved for companies that make similar sanitation or body care products. The main players in this industry controlled the market, but with the rise of COVID-19 and the need for increased sanitation measures, demand was much higher than supply was at the time. Nontraditional manufacturers such as liquor distilleries, and manufacturers outside of the U.S., began producing hand sanitizer to help close the gap. Some hand sanitizers were created using a different type of alcohol, the chemical compound methanol, which is not an acceptable ingredient according to FDA requirements.

As this product needed to be removed from retail shelves, the non-viable hand sanitizing products – ones which lacked specifications such as having low alcohol content, did not meet regulatory requirements or expired – were in most instances shipped from retail to a warehouse. Deemed unusable, the sitting hand sanitizers created a potential hazard due to the amount of flammable materials being stored.

The problem called for Clean Earth's Fullcircle™ program to implement a recycling and beneficial reuse solution through fuel blending. Collaboration with vetted Clean Earth partners, the alcohol was recovered from the hand sanitizer as a gas

fuel additive product – giving these non-viable products a second life as a new usable energy source.

Once the alcohol was recovered, the nearly empty hand sanitizer containers were sent through for processing using a method known as fuels blending, which is completed when a material has enough British Thermal Unit (BTU) energy value to be extracted and reused. The process included waste solvents from manufacturing, lubricants and off-spec fuel being sent to cement kilns to be used as an alternative fuel source. In this manner, all of the material's energy value is recovered. Additionally, packaging was incinerated and metal cans crushed and scrapped for recycling.

Another important component to this solutioning was logistics and strong, vetted partnerships. We created a plan that never stopped working for the customer. Transportation was coordinated coast to coast which allowed for timely pickups to meet the customers' needs. In addition, our partnerships across the country allowed us to customize solutions based on site availability. This was extremely important given unexpected shutdowns due to COVID-19. Through all of our partnerships, transportation efficiencies, and innovative solutioning – we kept our teams safe and provided a unique recycling solution that benefited the customer and the environment at large.

MEETING FDA GUIDELINES AND OUR CUSTOMERS' GOALS

For a majority of states, there is an FDA rule that exempts this waste (hand sanitizer) from having to be managed as hazardous waste if it goes through a process to recover the ethanol. During the recycling process, the sanitizer must be distilled, and the alcohol recovered, in order to meet federal guidelines. Then, because the recovered material is classified non-hazardous, it does not count toward a company's hazardous waste generator status. For many companies, not recovering this material in a sustainable manner would have resulted in a generator status change to a large quantity generator (LQG) rather than a small quantity generator (SQG) with increased regulatory burdens that come with an increased generator status.

DEVELOPING CUSTOMIZED SOLUTIONS

Clean Earth's Fullcircle™ solution for this hand sanitizer recycling need took into consideration time, budgets, and a multitude of strict regulations by state. Fullcircle's high-touch concierge service provides Clean Earth customers with customized waste solutions that takes their entire operations into account, gaining valuable insight at every point of waste generation, providing significant cost savings, brand protection and risk avoidance.

FULLCIRCLE™ VALUE ADD



Nearly 1.1 million pounds of non-viable hand sanitizer was moved to this sustainable alternative use and recycling solution in 2020. Additionally, for a specific customer, Clean Earth's Fullcircle team was able to service approximately 40-50 locations within one week that required emergency cleanout, recycling a one-time volume of 800,000 pounds of hand sanitizer.



Each customer that has utilized this hand sanitizer recycling solution has seen an increase in sustainability numbers in their annual reporting.



This solution allowed each customer to increase their progress toward their company's sustainability goals and increase their percentage of materials in the sustainability hierarchy.

BENEFITS OF THIS UNIQUE FULLCIRCLE PROGRAM

Flexibility & Know-How

Our program has the flexibility and insight to focus on our customer's short and long-term sustainability goals simultaneously so we can make a positive environmental impact now and in the future.

Network of Vetted Partnerships

Our network of partnerships in the waste industry and beyond opens doors to innovation and efficiency like no other program in the country.

We Never Stop Working for You

Clean Earth's Fullcircle Program is here even after your journey to zero-waste. Our deep knowledge of compliance and environmental innovation will keep your company's waste generation ahead of the curve always focused on eliminating the waste before it happens.

CleanEarth™



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