MAY 2022 // **ISSUE 25**

SENECA NEWS

OFFICIAL NEWSLETTER OF SENECA COMPANIES, INC.

IN THIS ISSUE

A MESSAGE FROM JC

JC RISEWICK
President & Chief Operating Officer

Seneca has continued to grow over the first quarter of the year. We now have 400 full time staff with the vast majority of those team members being technical field staff. We have over 40 open positions to fill on top of that! It really is quite an exciting time to be a part of Seneca Companies.

We have been diligently working on each initiative we set out to do at the end of last year. We are waist deep in our new ERP software project and plan to be live by the end of 2022. This has required a herculean effort to date from those involved on our staff. On top of their every day jobs they have also taken on several additional meetings and deliverables. Thank you to all our team members who are committed to making sure this is a success. Without everyone's commitment and hard work this project would not be successful.

In addition to this we will be venturing out into a few new markets this year. Salt Lake City, Utah, Grand Rapids, Michigan as well as a new fuel polishing hub in the Minneapolis, Minnesota area to name a few. We are very excited to bring our products and services to these new markets and serve the great customers of those areas.

We have also added an entirely new business unit to Seneca this year. We now have full tank and line testing capabilities with dedicated equipment and staff. We plan to bring this service across our entire footprint over the next few years. Finally, we were named Gilbarco Veeder-Root's Distributor of the Year in 2021. We are extremely humbled by this honor and proud to be representing the product to our valued customers.

It is been a busy few months, but we aren't slowing down and the rest of 2022 looks to be even more action packed. Thank you to all of our valued team members and customers who make it all possible! ▪

SENECA TURNS 50!

CELEBRATE WITH US

Friday, May 20, 2022

3:00 - 7:00 p.m.

Location:
4140 E 14th Street
Des Moines, IA 50313

Food & beverage trucks, games,
Dueling Pianos and more!

HIT THE GROUND RUNNING

BY SCOTT COLE
Oklahoma City Branch Manager

Seneca's new Oklahoma City branch hit the ground running with the purchase of Titan Fuel Systems in May of 2021, but there was still some growing to do to fill these larger shoes. Seneca OKC immediately began hiring and training service technicians and strengthening its construction team. Casey's had recently acquired 48 Circle K sites in the OKC area, and requested that EMV payment methods be installed in dispensers at all locations. Seneca OKC started putting in the work to get these sites converted to Casey's and to begin offering EMV payment methods at the pumps and the bolstered fuel product offering that Casey's brought to the market.

Within a few months our Seneca OKC branch was fully established and ready to take on high demands. Casey's provided Seneca a list of 62 locations that had dispensers needing to be EMV upgraded. As soon as we installed shelving in the warehouse, the deliveries began to arrive. We have now upgraded all 62 of these Casey's locations which included over 100 dispenser swaps and upgrades, as well as EMV conversions. Many of the old Circle K sites had connected tanks and lines under dispensers which Casey's wanted to utilize to offer additional products at the time of the EMV conversion.

The added complexity of site mapping, disconnecting tanks and lines, ATG (Automatic Tank Gauge) re-programming and product conversions made these dispenser swaps anything but simple. This project was a challenge for everyone involved; from the construction crew responsible for everything underground to the setting and piping of the dispensers to the technicians and electricians who had to make sure all systems were running smoothly. The Seneca OKC branch stepped up in a big way and answered the call.

With such a large-scale project, there have been a few sites that have needed additional attention to ensure everything is up to date and running smoothly. One of these sites required a complete re-pipe and another is scheduled for a completely new fuel system. With the help of an attentive and proactive team, the re-piping issue was identified just in time for Seneca to be able to order the necessary parts and complete the upgrade in a short time frame. Working closely with Casey's remodel team Seneca was able to adjust schedules and ensure the fuel system upgrade was completed by the time of the the convienence store was open for business. Seneca OKC has worked through its growing pains and now has the staff, equipment and experience to provide exceptional service, parts and petroleum construction to its customers. ▪

ENERGY SOLUTIONS

EXPANDING INTO FUEL MARKETS

BY ADAM DAVISON
Division Manager

For the last 29 years, Seneca Remediation's core business has been building custom treatment systems to assist clients in cleaning up subsurface contamination across the entire country.

Our clients, with the majority being environmental consulting firms, were so successful in their remediation actions that the EPA reports that over 502,000 contaminated sites have been cleaned up in the last 33 years. Seneca Remediation is very proud to have been a part of this massive cleanup effort, with 37 states now reporting they have closed over 90% of their Leaky Underground Storage Tank sites (EPA).

Although this is a huge win for all, from a business perspective we have definitely noticed the lower demand for remediation treatment systems. Over the last few years, we have found that we can continue to provide treatment systems and related support services, while also expanding into new markets. One market we naturally gravitated towards was fuel filtering and blending systems. An example of some of the recent projects we have been working are included here:

Portable Fuel Restoration and Tank Cleaning Systems

Portable fuel restoration and tank cleaning systems are used daily by our Seneca Waste Solution teams. The systems are towed to the fuel storage tank site, allowing operators to remove large amounts of unwanted fuel contaminates (water, cloudy fuel, biomass, sediment) while also recirculating the pure fuel back into the tank. The result is nearly the entire tank of fuel can be saved and brought back up to specifications for immediate resale.

Due to Waste Solution's superior results and rapid clean times they are in high demand and have developed a need for more equipment. This winter our teams began meeting with our Australian partner, Leighton O'Brien, who designed the fuel restoration/tank cleaning systems. After talking through some of the latest designs and improvements it was agreed that Seneca Remediation would build the next two systems for Waste Solutions. Our deep understanding of pumps, filtration and liquid piping has allowed our team to immediately excel at the building process. Our small agile group has been able to provide high quality construction methods, including MIG welding while also working quickly to provide short lead times. It has really been a win win for all parties.

Fuel Restoration Carts

Seneca Waste Solutions also offers services to restore fuel on smaller harder to reach fuel tanks. These types of fuel tanks could be for backup generators, boats or farm equipment. We were able to build effective 40 gpm cart systems with both bag and cartridge filtration. The carts were built with ergonomics in mind such that they could also be pulled through a standard doorway if the site required it.

Our team has fabricated multiple units this year, with the Waste Solutions team reporting back that they are working tremendously well.

High Flow Fuel Filtering

Some fuel storage applications require the need for permanent filtering systems. This spring our crew installed multiple 10-micron 125 gpm cartridge filters for bulk fueling at a nearby Iowa Coop. The steel fuel piping was custom cut and threaded onsite so the filters could be fit into the existing fuel system. Pressure gauges and easily accessible lids will now allow the customer to monitor and quickly change the fuel filters.

Bioblending Fuel Buildings

We have had several recent projects in which we have built insulated fuel sheds to cover above ground bioblending pumping and metering equipment. These sheds are insulated, pre-wired, and built without a floor so they can be directly lowered over onsite equipment. This helps customers speed up construction and ensure design specifications are met.

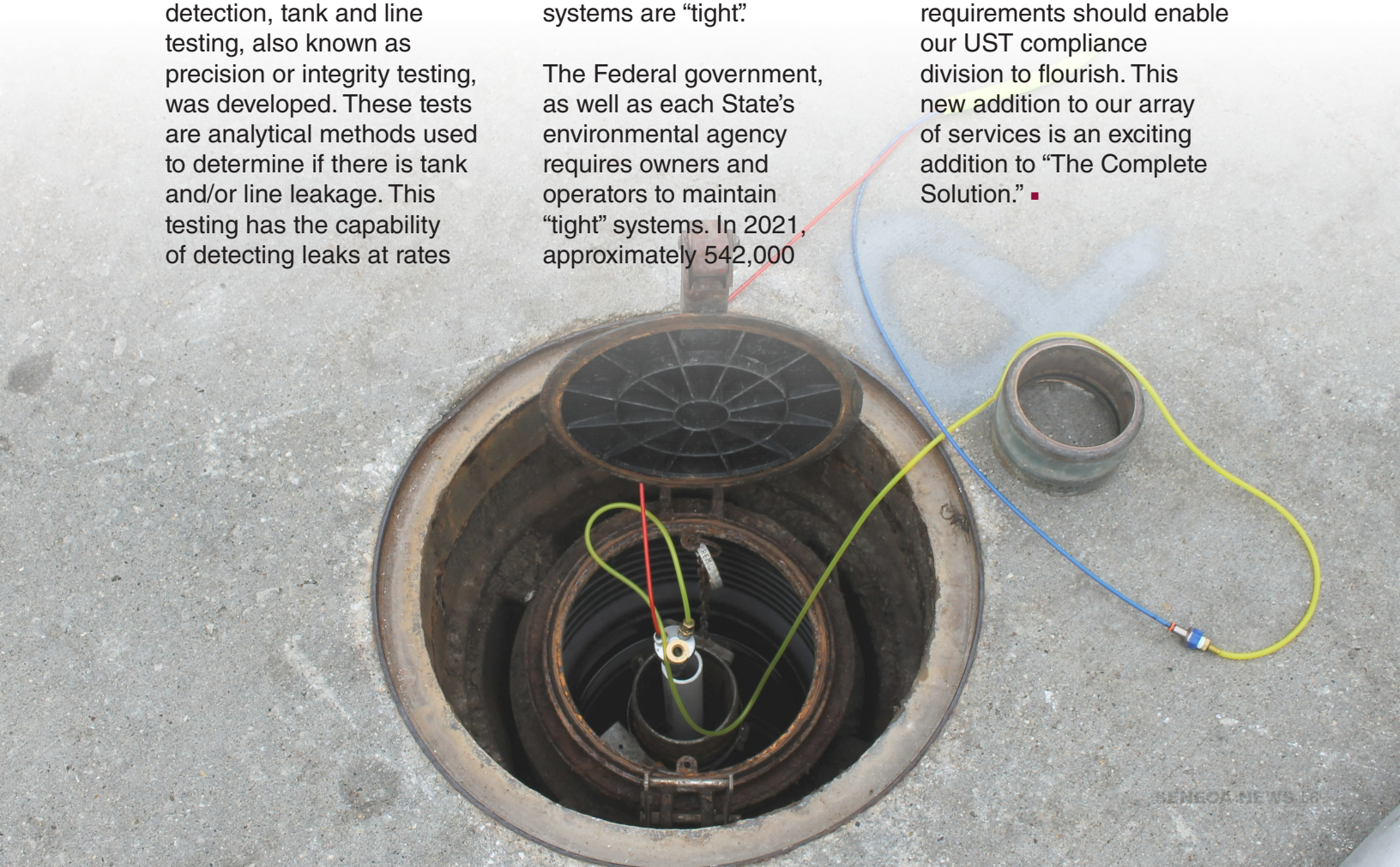
TANK AND LINE TESTING

NEW TECHNOLOGY, NEW OPPORTUNITY

BY MARK SHIRLEY
Program Director

In 1988, the Federal Underground Storage Tank Act was passed due to several issues related to leaking gas tanks impacting sub surface water and surrounding properties. The act had four basic requirements; overfill prevention, overspill prevention, corrosion prevention and leak detection. Within leak detection, tank and line testing, also known as precision or integrity testing, was developed. These tests are analytical methods used to determine if there is tank and/or line leakage. This testing has the capability of detecting leaks at rates as low as 0.1 gallon per hour. Tank and line testing is important because the detection of a release from an underground storage tank (UST) system can allow for early investigations to prevent the spread of any contamination. In addition, this technology is beneficial for commissioning newly installed UST systems and confirming that active UST systems are "tight."

The Federal government, as well as each State's environmental agency requires owners and operators to maintain "tight" systems. In 2021, approximately 542,000 USTs held regulated substances both publicly and privately. Regardless of where a tank is located, annual leak detection is a requirement to ensure these sites are safe and efficient. Seneca is one of the largest petroleum equipment service companies in the US. The customer base within Seneca and the ongoing regulatory requirements should enable our UST compliance division to flourish. This new addition to our array of services is an exciting addition to "The Complete Solution." ▪



FUEL QUALITY
AND WHY IT'S IMPORTANT

BY CHRIS BIELLIER
VP of Environmental Services & Waste Solutions Divs. & Strategic Partnerships

In late 2013 through early 2014, we began receiving an increased number of inquiries regarding issues in storage tank and dispensing equipment due to apparent fuel quality concerns. We were asked to investigate options to aid in resolving the issue as well as become better familiarized with fuel chemistry and its affects. Most importantly, we needed a solution. We then began researching technologies and processes available at the time to aid us but if we were to come to a proven solution fast, we would need to align ourselves with a company or technology with a reputable history. We vetted a half dozen American based vendors and were fortunate to align ourselves with an overseas reputable company that was in the process of exploring their options here in the US.

In 2014, Seneca Companies' Waste Solutions division entered business partnership with Leighton O'Brien (LOB) based in Melbourne, Australia. We became their first US based distributor for their patent technology for fuel restoration. Soon afterwards, we took possession of two (2) LOB fuel polishing trucks. By 2017, we had added two more units to our fleet. By June of 2022, we will be adding another 2 units to fulfill the existing and growing c-store customer base needs. The technology offered by the LOB design has allowed us to clean tanks ranging in size from 1,000 to 100,000 gallons. However, in the past several years a need has arisen to address fuel quality issues in the commercial markets of data centers, banks, education campuses, municipalities and hospitals, etc. in possession of emergency or backup generator systems. In most cases, these units are in logistically hard to access areas such as court yards, basements or roofs, which raises an issue. Seneca has risen to the challenge and begun building MTC (mobile fuel cart polishing units) which are compact and able to access hard to reach areas and clean diesel fuel tanks as small as 100 gallons. It became readily apparent that the timing was right to dive into this venture, as the issues had recently come to light. We began to offer fuel restoration solutions that would benefit our customers and correlate with our company motto of "The Complete Solution." But before we expand on the fuel restoration solution, we must first understand the cause of poor fuel quality and its effects as a result of a changing fuel chemistry.

In 2017, I was interviewed by Fuel Marketer News and the article was published in their September edition. My thoughts still hold true to this day as they did when I interviewed with them. Since then, I have participated in numerous industry discussions, best practices forums and approach methodologies in addressing the fuel quality issues faced across the platform. Not just from a business development perspective, but more so from an educational viewpoint based on facts and not assumptions. I have spent a considerable amount of time over the

past 7 years familiarizing myself with fuel chemistry issues, the evolving nature of the fuel industry, how it affects our customers and how we are tasked with aiding in solving the issues affecting those we do business with daily. When our customers approach us with questions regarding fuel quality or fuel delivery system failures they do not want just answers or a quick fix always, but solutions. Sometimes our approach can be reactive initially as their system is down, performing below expectations or an issue arose creating a PR customer perception situation that is not favorable to them. Our efforts lead to education of why and how the condition of their system came to be as it pertains to fuel quality, what measures can be taken to minimize the effects or prevent its reoccurrence and what the consequences could be if they fail to acknowledge it exists or correct the issue. Continuance of refining our process and efficiencies has become our goal whether our customer is a petroleum marketer, a commercial business or an owner of an emergency backup generator system. Each have a unique approach to attain the desired outcome of how to remedy the issue at hand. Below is the article as it was presented in Fuel Marketer News and is worthy of re-introduction.

In the last five years we have come a long way in understanding the causes and effects of poor fuel quality and maintenance-related issues for the retail and commercial fuel industry. However, we have still got a way to go in terms of a) understanding the impacts of changing fuel chemistry, and b) getting ahead of the problem through a proactive approach to managing fuel quality.
Fuel contamination has a direct impact on a business's bottom line. When gasoline and diesel fuel users see their equipment maintenance costs increasing and liability claims mounting, they have reached a point where they can no longer turn their back and look away. I often use this analogy: If you have symptoms of the flu, you take medicine to cut it off at the pass. But if you ignore the symptoms, you become unwell and drag yourself off to the doctor as the illness sets in.

As a petroleum industry and environmental solutions provider to the fuel retail industry, our customers started approaching us with questions regarding problems with fuel quality about four or five years ago. They could see the maintenance effects of fuel contamination such as blocked filters, slow flow pumps, failing components and evidence of corrosion on varying scales, but, understandably, were not aware of the underlying causes. Anticipating this growing issue, we began to offer fuel restoration solutions by partnering with Leighton O'Brien, using their patented fuel polishing technology to treat the root causes of poor-quality fuel and its effects as a result of changing fuel chemistry.

Since the introduction of ethanol and ultra-low sulfur diesel (ULSD) about a decade ago, a growing number of diesel and gasoline storage tanks and dispensing systems have experienced unusual and accelerated corrosion and bacteria problems. What might have taken 10 or 20 years previously was showing up in as little as 30 to 60 days. Then in 2012, a key industry research piece called the Battelle Study attributed mild steel corrosion from enhanced microbial activity in systems storing and dispensing ULSD and a correlation with the impact of ethanol cross contamination. Another common material fouling filters is a metallic coffee ground substance. Subsequently this problem has led to costly repair, blocking or slow flow or volume delivery pre-set errors. At first, many in the industry wanted to blame ULSD for these corrosion problems or bacteria accumulation in the tank bottoms because the problem began to emerge about the same time the industry switched over to ULSD. But ULSD is not corrosive by itself,

rather it's the bacteria that forms that create the issue. As mentioned previously, investigations found traces of ethanol in ULSD. Ethanol by itself isn't corrosive, but when combined with water in the fuel, it becomes the 'food source' that's conducive to the growth of bacteria. These bacteria convert (oxidizes) ethanol into acetic acid, which is highly corrosive to mild carbon steel. As it turns out, the switch to ULSD happened about the same time gasoline manufacturers started putting ethanol into gasoline. Trace amounts of ethanol-blended gasoline would get into the diesel fuel as delivery tankers switched from one product to the next – known as "switch loading." This cross contamination, even in small amounts, affects fuel quality.

Ethanol and water have one thing in common; they love each other, more so than gasoline and diesel fuel. When ethanol-entrained diesel fuel is discharged from a tanker into a ULSD UST with bottom water, the ethanol will migrate to the water at the bottom of the tank. Again, it's the water in both diesel fuel and ethanol that creates the process. This has led to the growing realization that the fuels we use today have much different compatibilities, don't play nice with one another and both don't like water. This is not to bash ethanol. It's here to stay and for good reason from an environmental standpoint. Not every UST in the country is experiencing the same level of corrosion or biomass accumulation. However, UST operators who address the water issue quickly have less problems.

The ULSD and ethanol-blended fuel corrosion problem is a lot like a three-legged stool – those legs being an energy source (the ethanol), acetobacter (which is everywhere) and water. You can't do much about the first two, but you can monitor and remove enough water from the equation to defeat the problem. By not transferring the ethanol from the diesel fuel to the water phase, you starve the acetobacter of the moisture and energy it needs to grow and multiply. Even if there's no cross contamination from ethanol, diesel fuel with the presence of any amount of water creates a petri dish for bacteria to form and accumulate in the tank bottoms. Over time it will be drawn up the system to the dispensers, creating flow issues.

Until the industry comes up with definitive solutions to these problems, visual observation and testing should be a regular part of your maintenance schedule. This includes fuel polishing if the problem exists. Quarterly inspections of your UST are best, semi-annually at least. Even if you have fiberglass tanks, the pipes and fittings are typically steel. You should also periodically look at the riser tube, joints and threads. If you see rust, you have a problem. Also check your fuel filters. If you see material that resembles coffee grounds, you may have a corrosion issue. Look for rust on the dispenser filter faceplates and if your filters have them, look at any steel springs. You'll typically see sediment in the filter media. To determine if it's rust, just pass a magnet over it.

ULSD is a very stable fuel, but if ethanol from switch loading is accumulating in the water phase of the tank and the acetobacter is converting the ethanol to acetic acid, then you need to address the water. If you see or suspect corrosion, you need to get your fuel tanks tested. If they do test positive, you need to take some corrective measures, possibly adding biocides to your fuel storage, removing the bottom water from the tank and filtering the entire contents all the way to the dispensing nozzle. Biocides will kill the bugs, but to keep them from coming back you need to nail the problem at the source by keeping water out of your fuel. The fuels today are here to stay. By taking a preventative 'flu shot' approach, you're preserving the health of your tank system and ensuring the quality of your fuel while keeping your maintenance budget, sales and brand intact. ▪

UNIQUE OPPORTUNITIES

AUTOMOTIVE DIVISION PROJECTS

BY ROWDY OGRADY
Project Manager

CITY OF LINCOLN - STARTRANS CNG FUELING FACILITY

Seneca bid and won a public bid for the new City of Lincoln – StarTrans CNG Fueling Facility in December 2019. Star Trans is the City bus transit system serving the Lincoln metro area. StarTrans had a need to increase the fueling capacity for clean burning fuels including CNG. The city had several CNG buses and Transit vehicles that were able to use CNG either already in the fleet or would be forthcoming. Seneca worked with the city and the design engineer to complete an acceptable plan and schedule of install for the project at the StarTrans Bus Terminal in Downtown Lincoln. Part of the project would be decommissioning an existing AST tank that was near the end of its usable lifespan, and in its place the new CNG fueling system would be put in place. The City of Lincoln had purchased a slightly used CNG system and equipment from a site on the south side of Lincoln.

The first part of the project was to decommission and remove the single existing AST which was under an existing canopy the client did not want to remove. We had to use a large ground crane that was able to get under the canopy but still pick up the tank and move it out from under the canopy which then could be picked by a larger crane to be put onto a trailer and hauled away. The tank was estimated to weigh more than 10,000 lbs. due to its composition and makeup. The next scheduled task was to disassemble the city's now owned CNG facility equipment and haul all equipment to the city's storage building while site work prep, new concrete footings and slabs were poured as well as new electrical service underground was installed. When all underground electrical, new footings and slabs were completed, it was time to bring the CNG equipment onsite to be assembled, piped and electrically connected to. After the new system was piped and electrified, we started up the system, test run, calibrated, and trained the StarTrans staff on the proper operations and maintenance of the system, and then finally handed it over for their use. ▪

CITY OF LINCOLN - STARTRANS ELECTRIC BUS CHARGING SYSTEM

Seneca also won this public bid for the new City of Lincoln – StarTrans Electric Bus Charging System Project in July 2020. The City of Lincoln was so pleased with the previous project that Seneca had completed for Star Trans – CNG Fueling Facility Project, they specifically requested Seneca to bid on the Bus Charging System Project. The project included connecting and wiring to a previously installed 2500Amp Service Power Bank MDP, this MDP was supplied and installed during the previous Seneca project completed for Star Trans, the CNG fueling project.

The first initial phase of the bus charging project included preparing the concrete pad and bollards install where the bus chargers would sit. After the concrete and site work was finished the next phase of the project included setting and mounting, conduit pipe up and wire up to 3 Star Trans supplied Siemens Bus Chargers to charge the new fully electric busses that Star Trans had purchased in the last year. A portion of the project included Seneca running conduit and wire to 10 different bus charging stations on the inside of the bus storage facility terminal where the busses would plug into charge. These charging stations were connected to the bus charging units on the outside of the building.

After all chargers were installed and in place, Seneca worked with Siemens and the bus company to startup, test run and program the charging system to the accurately charge the buses to capacity. A unique feature of the system would allow each charging stations to charge two separate buses at the same time, it would automatically switch over to the second bus plugged in as soon as the first bus was 100% charged to capacity. The final portion of the project included upgrading and installing all new LED lights inside the bus storage facility terminal for better visibility and less energy usage when the lights are being used.

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