On Whiskey Island, a large, cage-like hoist travels 1,800 feet beneath Lake Erie at a four-minute pace — a rapid trip that feels like a hellish eternity to an outsider. For Cargill (https://www.cargill.com/industrial/winter-road-maintenance/cdt-our-locations) employees, the descent, which can reach a top speed of 500 feet per minute, is more akin to the mundane morning elevator ride, en route to one of Cleveland's most unique workplaces: the underground mine, a cavernous world unto itself where the salt used to clear winter's icy roads is harvested each day.

Encompassing a total of 16 square miles beneath the lake, the mine's primary tunnel extends four miles north of the lakefront. From this central line, a growing number of tunnels running east and west are mined through a tried-and-true process used since the site's earliest excavation, after the salt deposit was first accessed in the late 1950s and extraction began in 1962.

"It's surprisingly similar to how it was mined 50 years ago, as far as the cycle goes," says David Harris, an engineer in the Cleveland mine. "We have adopted some underground wireless things, but most of the technology above ground doesn't work underground, because we can't see satellites."

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To begin the mining cycle, the salt deposit's face is drilled with holes, which are "powdered," or filled with explosives. These explosives are detonated through the process of "shooting," which leaves a cleared space filled with salt and rock, just over 20 feet deep.

A bulldozer-like loader "mucks," or clears, the area, and the deposit's fresh faces are scraped for loose salt rocks. The ceiling of the cleared tunnel is filled with six-foot bolts, long enough to reach the layer of rock above the salt to secure the structural integrity of the newest stretch of the tunnel.

Twelve miles of conveyor belts and sorting machinery carry salt and rock from the heart of the mine, and usable salt is transported above ground through a production hoist, to be loaded on a shipping vessel or stored for later use. April begins Cargill's boat-shipping season, which runs through the end of the year, during which two to three vessels, such as the "Mark Barker," a 639-foot ship produced by the Interlake Steamship Co., carries 18,000 to 20,000 tons of salt per shipment.

Bob Nelson, an engineering manager who earned a bachelor's degree in mining engineering at Virginia Tech University and has worked in different Cargill locations for the last 15 years, says working in salt is pretty stable, at least when compared to other areas of the niche industry, such as metals and coal, where the demands fluctuate with the markets.

Given the inherent danger an icy winter poses to drivers in Cleveland and abroad, it's no surprise that this local operation runs around the clock each day, as 223 employees coordinate to fulfill a daily average target of 12,000 tons of salt.

What is surprising? During my return from a tour of the mine, the chilly spring winds off the coast of Lake Erie nearly had me rushing back underground, where the temperature constantly hovers around 70 degrees.

Part of this environmental control is due to sets of sealed doors, which close off the primary corridor from the mine shaft to separate the incoming fresh air, transported via the pull of the descending hoist, from outgoing fumes and exhaust. Anyone spending substantial time in the mine will carry a heavy gasoline scent upon exit, but breathing in the mine isn't difficult or nauseating, thanks to its ventilation system.

Fresh air carries through the mine's spine: the dark, central corridor from which each new extraction begins. After mining is complete, these spaces are back-filled with rock, unusable salt, and even retired equipment, before being covered by berms and curtains that better direct fresh air to the mine's furthest depths.

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On the side of the path, mechanics and engineers can be found oiling up the heavy-duty machinery that remains operational due to the mine's lack of humidity. Were the equipment to once again see the light of day, it would likely rust out of usability within a month. A central hub

within the mine includes shops and vending machines, where Cargill employees can find spare parts and equipment for repairing all of the tools used below ground.

The headlights of vehicles akin to oversized golf carts, two rows deep, cut through the darkness of the mine, carrying Cargill's workers the miles between entry and wherever they are stationed for the day's shift.

While away from the stalks of floodlight found occasionally throughout the mine, my tour guide, Greg Jacknewitz, an eight-year employee of Cargill who has been the Cleveland mine's manager for close to a year, cuts our cart's headlights to introduce me to the special kind of darkness that exists within the mine — the kind where you can't see your hand just a couple of inches away from your face.

For this reason, headlamps are an imperative for miners and visitors alike. Any person entering the mine begins the trip by taking one of many numbered, battery-powered headlamps, which can be tracked throughout the mine. A metal dog tag, with the headlamp's number, is registered above ground and carried beneath, as an added measure of precaution.

The intricate, danger-filled mining operation requires a great deal of safety measures and clear communication among the miners. Color-coded reflectors line the central tunnel, guiding miners to exit paths in the event of a necessary evacuation. Over 100 FEMCO phones, used like walkie-talkies, are found in strategic locations. Each features a detailed map that shows where to find emergency breathing equipment and the mine's safe rooms, which can sustain inhabitants for three days in a perilous situation.

For Nelson, it was the company's "safety culture" that initially attracted him to Cargill when first entering the niche industry out of college.

"The most important thing to come out of the mine is the miner, so it's one of the things that drew me to Cargill and has kept me here."

THE READ

8:00 AM EST

July 31, 2023