

MONSTER INDUSTRIAL™



Monster Solutions

Big Monsters Tackle A Big Problem at Suncor

Alberta – Everything is BIG at Suncor Energy in Alberta, Canada. Trucks so big, regular size pickup trucks drive with whip antennas sticking 20' up in the air to avoid getting run over by the big truck's tires. There are big scoops to put 400+ ton (363 metric tons) loads onto the trucks alongside big pumps with big pipes that wind their way around Suncor's Oil Sands Group at Tar Island. Now, with the help of JWC Environmental and Jelcon Equipment, there are big Monster waste processing grinders.

Suncor is a world leader in mining and extracting crude oil from the vast oil sands deposits of Alberta. As conventional supplies are depleted in Canada, the oil sands offer an increasingly important energy source, already 34% of Canada's daily petroleum production. With this projected to more than double by 2007, Suncor has recently spent over \$3.25 billion to expand their oil extraction plant through the "Millennium Project," helping them become one of the lowest cost oil producers in North America.

There is more oil in the oil sands in Canada than in all of the sands in Saudi Arabia. These oil sands (also known as tar sands) are mostly made with a tar-like substance called bitumen. The tar sands are scooped up from an open pit mine and transported to an extraction facility for finer processing. The tar sands are mixed with very hot water, allowing oil to separate out at the top of huge separation tanks called "launders." The froth, which rises to the top, is an extremely hot (140°F/60°C), thick substance that is a mixture of water, bitumen, and sand. Inevitably floating in the froth are also bits of roots, petrified wood, among other plant life, etc. The froth is then mixed with



PROBLEM: Bits of debris caused pumps to plug

SOLUTION: 4-HYDRO-I

CONSULTANT: Jelcon Equipment

George Marlowe, Suncor Maintenance Supervisor, next to the 4-HYDRO-H.

Naphtha to make it flow better and pumped to an extraction facility where it is further separated.

In the past, the bits of plant life would cause pumps to plug in the extraction facility, thereby creating problems throughout the production line. At current oil prices, ten minutes of downtime would cost Suncor over \$50K in lost production. It was vital that new equipment incorporated into this project would grind materials to a size that would not plug the pumps.



Here, raw bitumen is separated from the sand in Suncor's giant separation cells.



Clayton Sears, a mill wright at Suncor, had previously worked at Weldwood of Canada and favored Monster waste grinders from his work there. Les Gaston from Suncor contacted Elaine Connors of Jelcon Equipment, JWC's Western Canadian representative, and within two weeks a 4-HYDRO-I processing grinder was shipped out, installed by Suncor and put to the test on a small pilot line.

Triumph! Pleased, Suncor purchased units suitable for the actual production line. Three in-line 4-HYDRO-I's with 32" (800mm) cutting chambers were required. Only problem was, although JWCE had a 32" open channel Macho Monster, there had never been an in-line Monster this big before. It was decided to fabricate 20" (500mm) flanges suitable for the existing 20" (500mm) line, with cast flanges to follow later. The units were built and shipped to the site in time for the overall startup of the Millennium line. Because of the high volume of sand going through the units, it was decided to purchase a spare Monster grinder.

In September 2001, Gregg Coons, a Field Service Technician from JWCE Product Support, visited and conducted a maintenance training seminar, assembling the spare grinder as part of the training.

The units have been installed since June 2001 and are reported to be functioning exceptionally well. An additional HYDRO Monster grinder was also purchased for use in the existing facility.

Big Monsters tackled a big problem, and the result? Big Success!

About JWC Environmental

Founded in 1973, JWC Environmental is a global leader in high-efficiency, dual-shafted waste grinders. We've built and shipped over 35,000 Monster shredders, screens and compaction systems to customers around the world. We offer over 200 different shredder configurations. Our commitment to quality and reliability makes Monster waste processing grinders legendary in many industries. Our

superior technology provides solutions for the most demanding applications including sludge grinders, sewage grinders, wastewater fine screens, CSO screens, washer compactors and septage receiving stations.

For further information contact JWC Environmental, 290 Paularino Ave., Costa Mesa, CA 92626, USA, Tel: 949-833-3888, Toll-free 800-331-2277, Fax: 949-833-8858, E-mail: jwce@jwce.com

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At the Suncor oil sands plant, bitumen is heated and sent to drums where petroleum coke, the heavy bottom material, is removed. Petroleum coke, similar to coal, is used as a fuel source for utility plants.



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