

TAR SANDS SHOWDOWN – WATER CONTAMINATION

- Tar sands extraction requires between 3.5 and 5 barrels of water and only 10% can be returned to the river system. The vast majority ends up in lake-size tailing ponds filled with water and toxic materials which form a thick toxic sludge.
- For one square meter of bitumen to be mined, six square meters of tailings are created. These tailings contain salts, heavy metals, toxic hydrocarbons and pollutants such as naphthenic acids. The water is so toxic, minnows dropped into a pond die within 96 hours.
- These toxic lakes currently cover over 55 km² in parts of Northern Alberta. If collectively dumped into Lake Erie, they would create a pool 20 cm deep, and by 2030, the waste would be 1m deep.
- Syncrude's Tailing Dyke pond was built in 1978 and is 22 km² in size, the largest dam in the world except for the Three Gorges in China. Syncrude dumps 500,000 tons of waste every day, and the pond now contains more than 540 million m³ of tailings.
- Suncor's current mining operations include nine tailings ponds that cover an area of 2,280 hectares. Within 10 years, it is expected that due to the many projects yet to come online, the tailings will cover three times their current area.
- The lakes have cannons that must be set off every 30 minutes to prevent bird and wildlife from drinking from the toxic sludgy water. Despite preventative measures, 500 ducks died in one Syncrude's tailings pond in April 2008. Studies have shown that hundreds if not thousands of birds die each year in the ponds.
- In a report for Suncor in November 2007 found that 5 million litres have leaked from a decades old tailings lake into the groundwater. Given the interconnection of the watershed, it is quite likely that the toxic water will eventually end up in the Athabasca River contaminating fish, plant-life, animals and communities downstream.
- In 2003, the Mackenzie River Basin Board declared: "...an accident related to the failure of one of the oil sands tailings ponds could have catastrophic impact on the aquatic ecosystem of the Mackenzie River Basin due to the size of these ponds and their proximity to the Athabasca River." In fact, a leak that happened on Suncor's site that occurred in 2007 was kept secret from downstream affected communities.
- Downstream from the tar sands on the Athabasca are more than 360,000 Aboriginal peoples. The Community of Fort McKay is not only downstream, but also surrounded by tar sands development. Also downstream is the community of Fort Chipewyan, on the southwestern tip of Lake Athabasca.
- A study conducted for the Fort Chipewyan community found differing levels of chemical constituents exceed guideline levels downstream of the tar sands. Dr John O'Connor, a physician who started treating residents of Fort Chipewyan in late 2000, noticed auto-immune diseases, and a large number of people with diabetes, renal failure, hypertension, high rates of cancer, and specifically certain rare types of cancer, that shouldn't been seen in the numbers seen in a community of Fort Chipewyan's size.
- In Sarnia there are four refineries that receive tar sands crude. Downstream from Imperial Oil and Suncor refineries in Sarnia, serious health concerns have been raised by the Aamjiwnaang First Nation. The community has seen twice as many girls born as men, and have reported feminization in turtles in the St. Clair River. While the Suncor refinery is only one of many major polluters in the area, they are ranked number one for releasing pollutants that are known or suspected to cause reproductive and developmental toxicants.

For more information, or to get involved visit <http://www.tarsandswatch.org>

<http://www.oilsandswatch.org>, <http://www.ienearth.org>, <http://www.tarsandstimeout.ca>, <http://www.environmentaldefence.ca>

Excerpt from author Tony Clarke's Book "Tar Sands Showdown"



...Approximately 90 percent of all the water used in the mining of the bitumen is stored as tailings in thick, soupy lake compounds or tailings ponds on both sides of the Athabasca River. Together, these tailings ponds cover an area of fifty-five square kilometres; if they were drained into Lake Erie today the cumulative tailings would cover the lake bed to a depth of twenty centimetres. Given another decade, these tailings ponds will cover an area of 150 square kilometres, nearly three times their current size. For every barrel of oil produced, says the Alberta Chamber

of Resources, six barrels of sand and one-and-a-half barrels of tailings are dumped into these ponds. These tailings contain salts, heavy metals, toxic hydrocarbons and pollutants such as naphthenic acids and polycyclic aromatic hydrocarbons (PAHs). This heavy concentration of toxins and other pollutants poses a direct threat to the fish and bird populations in the region.

The tar sands tailings compounds involve 10 dams, some of which reach as high as 100 metres. The largest one is the Syncrude Tailings Dam. Built in 1973, this Syncrude tailings pond covers an area of twenty-two square kilometres and holds some 540 million cubic metres of water, sand and tailings. Each day, Syncrude dumps 500,000 tons of tailings into its tailings pond. According to the US Department of the Interior, the Syncrude Tailings Dam has been, until recently, the world's largest dam. But, with the completion of the Three Gorges Dam in China in 2008, the Syncrude dam will be ranked the second largest in the world based on the volume of construction materials used. The toxin-laden muck that floats on top of the Syncrude and other tailings ponds poses a constant threat to ducks and other migratory birds who unknowingly land on the water surface, become soaked in oil, drown, or are poisoned. Syncrude and the other operators use scarecrows and propane cannons in an effort to keep birds from landing on their tailings ponds, which have not proven to be foolproof by any means.

Perhaps nothing more dramatically illustrates this problem than the sudden massacre of ducks that occurred in late April 2008. A flock of over 500 ducks landed on the Syncrude tailings pond, which is situated along a major migratory route for waterfowl. Only three of the ducks were rescued while more than 500 perished. Around the world, news of the ducks that died in Syncrude's tailings pond spread like wildfire. Images of dead ducks smothered in oil appeared on the front pages of newspapers and on television news broadcasts. Instantly, the incident sparked public furor and further tarnished Canada's environmental reputation. Although Syncrude officials apologized and Prime Minister Harper acknowledged the "terrible tragedy" that had occurred, the fact remains that the tailings ponds are highly toxic and pose an ongoing and profound environmental threat. The incident also proved to be a major setback to Premier Stelmach's 25-million-dollar campaign to assure the US and the rest of the world that the Alberta tar sands are "environmentally friendly."...