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I was able to find myself on a tour of the OilSands in April thanks to the Energy Council of Canada and Suncor Energy. What a tremendous opportunity this was. Arguably the tours arranged through Industry are more in depth and one gets to see more but Suncor Energy also works with the City of Fort McMurray in offering public tours throughout the summer months. I would recommend to anyone to go see this for themselves.

One cannot adequately describe the traffic situation. Fort McMurray has somewhere between 65,000 and 75,000 people depending on which data set you follow and what exactly it measures in terms of residency and geographic scope. The roads leading out of town and the roads to the north (where the OilSands are located) are in a constant state of rush hour. The OilSands Producers provide free bus services to encourage their workforce not to drive themselves. The buses have their own bus lanes to get out of the city's constant traffic and get to the highway. Also the companies stagger their shifts in order to somewhat attempt to stagger the traffic. Traffic remains a tremendous issue that can only be appreciated through experiencing it.

The Human element required for an OilSands operation is also mind boggling. As you tour around the site the throngs of workers at every location – coming and going – is simply astonishing. People come from around the world and represent seemingly an endless number of cultures and languages brought together in one small geographic location. These people bring families and have created a vibrant community in the north.

The airport depicts these realities – flights coming and going constantly – the human throng within the terminal seeming to be a constant. However despite all of these challenges there is a northern spirit and camaraderie. Folks are happy with their lot in life and express it through genuine interest for their customer, colleague or stranger – it does not seem to matter who you are.

In the recent years we have spent a lot of time defending what the OilSands may or may not stand for. Environmentalists around the world as well as certain Nations in the world have pointed at the OilSands as the poster child of the movement against fossil fuels. The argument has been one of attempting to shame the world off of Oil. Eighty percent (80 %) of the production comes from in situ (drilling) and the use of SAGD (Steam Assisted Gravity Drainage). The other twenty percent (20 %) comes from mining operations. The different techniques are applied based simply upon the proximity to the surface. Mining is for product within a couple hundred feet of the surface. The rest is deeper and requires drilling. It is the initial footprint of the mine sites (before reclamation) that become the focal point of those who wish to create a negative specter of the OilSands in particular and the use of Oil in a broader sense.

The focus of much of the concern deals with Tailings Ponds. Tailings are a mixture of fine clay, sand, water and residual bitumen produced during the extraction process that separates bitumen from the oil sand. Tailings are pumped into holding ponds to settle solids from water. When tailings are released to a pond, the heaviest material – mostly sand – settles to the bottom, while water rises to the top. The middle layer, the mature fine tailings (MFT), is made up of fine clay particles suspended in water. Some of these particles settle, but much remains suspended. The challenge is that MFT has historically taken many decades (approximately 30 years) to firm up sufficiently for reclamation. As a result, OilSands Companies have needed more and larger oil sands tailings ponds over the years.

Tailing Reduction Operations (TRO) is a new approach Suncor has developed for managing tailings at its oil sands mining operations. Like all mines, oil sands mines generate tailings – left over material produced through the extraction process. The TRO approach is expected to

result in significant improvement in the speed of tailings reclamation. Suncor believes TRO will help it meet new provincial regulatory requirements and, just as importantly, the changing expectations of stakeholders. Suncor is highly motivated to accelerate the pace of tailings reclamation. The current tailings ponds cover a total of 31.8 square kilometres and contain approximately 230 million cubic meters of MFT. Active tailings ponds account for nearly 30 percent of the 17,749 hectares of disturbed land Suncor is currently working to reclaim. TRO is a significant advance in tailings management and reclamation

That is a bit of the sales pitch but the reality of the process is to significantly reduce the requirements for tailing ponds and to significantly reduce the time line of reclamation to about 10 years. The implementation of TRO involves converting fluid fine tailings more rapidly into a solid landscape suitable for reclamation. Mature fine tailings (MFT) is mixed with a polymer flocculent, and then deposited in thin layers over sand banks with shallow slopes. The resulting product is a dry material that is capable of being reclaimed in place or moved to another location for final reclamation. This drying process occurs over a matter of weeks, allowing for more rapid reclamation activities to occur.

The polymer flocculent adheres to the clay particles in MFT causing them to bundle together. This results in the separation of clay from the water. The polymer flocculent is an anionic polyacrylamide, a class of chemical commonly used in municipal water treatment facilities to settle out solids. This chemical is completely safe, as it is inert and does not react with the environment.

The above was technical but I would encourage you to Google the process and see some of the images and pictures for a much more visual understanding. I will post the TRO pamphlet on our website as well on the front page for viewing.

From the Thursday Files

It doesn't matter how many people are following you. It matters who listens to you.

- - Chris Brogan , on twitter Feb 29, 2012