

Community Connections

April 2007

News from the Irving Oil refinery 

Committed to Employee Safety

The refinery is committed to the safety of our employees. In 2002 we began a new safety process called the Behavioural Accident Prevention Process or A.C.E. (Anticipate accidents; Communicate safety; Eliminate at-risk behaviours). Employees are trained to observe their coworkers while they perform their regular work. The observer looks for specific safe and at-risk behaviours and when the job is complete, they discuss their findings with the other employee to improve their safety behaviours. The results of the observation are completely anonymous.

Some of the things that the observer looks for include:

- Is the employee wearing the proper personal protective equipment (for example, safety gloves, safety glasses, ear plugs, and hard hats)?
- Is the employee keeping their eyes on the task?
- Is the employee taking shortcuts?

Since the process began, approximately 300 Irving Oil and contracted employees have been trained and they have made over 10,500 observations. These observations have



Greg Anderson with A.C.E. Observers.

led to many positive changes in safety. There are now over 10 different types of gloves employees can choose from so they can use the safest type for their current task. Ergo mats were installed in the lab so employees can be more comfortable while standing for long periods and help to prevent long-term back and leg pain.

The process helps employees realize what they can do to make their job safer, such as wearing goggles instead of safety glasses or keeping their eyes on the path.

The A.C.E. process also allows the observed employee to make safety suggestions anonymously that they may not feel comfortable making otherwise.

A steering committee consisting of trades workers and shift personnel direct the A.C.E. process and represent the employees so that their safety suggestions and requests can be implemented in a timely manner. "The power of the process is peer to peer safety observations, and conversations about safety driven from the bottom up," said Greg Anderson, current A.C.E. process facilitator.

One of the most flexible things about the process is that anyone can be an observer and can observe any other employee, even if they are unfamiliar with the task they are observing. Mr. Anderson noted that it can be beneficial to have someone unfamiliar with the task perform the observation because they may identify an at risk behaviour that the person who does the work regularly may not see.

Through the A.C.E. process, Irving Oil will continue our commitment to the safety of our employees.



First Eider Rock Open House Held

On February 16 and 17, the first Open House about the proposed second refinery, Project Eider Rock, took place at the New Brunswick Community College (NBCC) campus on Grandview Avenue. The Open House provided attendees with an overview of project plans at this early stage, such as the project's components, location, environmental assessment process, and the anticipated economic benefits.

Over 400 people attended the Open House over the two days. Six booths were set up around the NBCC gymnasium, with each booth pertaining to a different topic related to the project and staffed by members of the Project Eider Rock team to distribute hand-outs and answer questions. Through these discussions, a wide range of comments and questions were raised. Comments ranged from questions about what impact the project could have on the environment, to how soon jobs and other benefits will start to reach the community.

Thank you to all of those who attended - your feedback is now part of the environmental assessment process, where

it will be factored in to decisions being made by the provincial and federal regulators.

There will be many other opportunities for public consultation on Project Eider Rock throughout the year, so stay tuned for more information on the next Open House.



Richard Folkins, Senior Operations Representative, speaks with a community member at the Open House.

New Tail Gas Unit Update

The construction phase of the new Tail Gas Unit (TGU) began in February. Mass excavation of the main site has been completed and 141 of 230 piles have been driven. All work is currently progressing on or ahead of schedule.

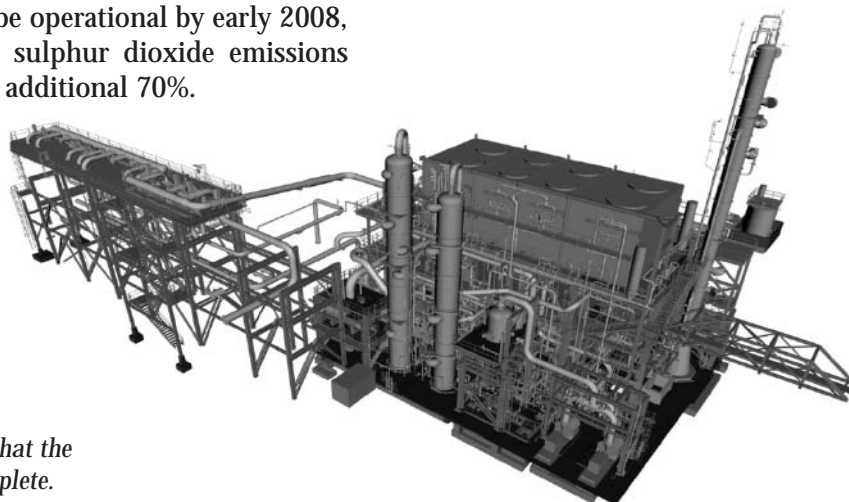
Five of the seven sub-contracts have been awarded, with the final two being awarded in April and June.

Safety remains key to the project's success. To date, 50 safety audits have been conducted and 198 people have completed the project specific safety orientation.

The new TGU is expected to be operational by early 2008, and is anticipated to reduce sulphur dioxide emissions from the sulphur block by an additional 70%.

How much material is going to be installed?

Concrete	1,200 cubic yards
Steel	600 tonnes
Piles	230 each
Piping	29,000 linear feet
Cable	200,000 linear feet
Heat Tracing	8,500 linear feet
In-line instruments	225 each



A computer generated picture of what the new TGU will look like when complete.

Reducing the Refinery's Impact on Our Neighbours



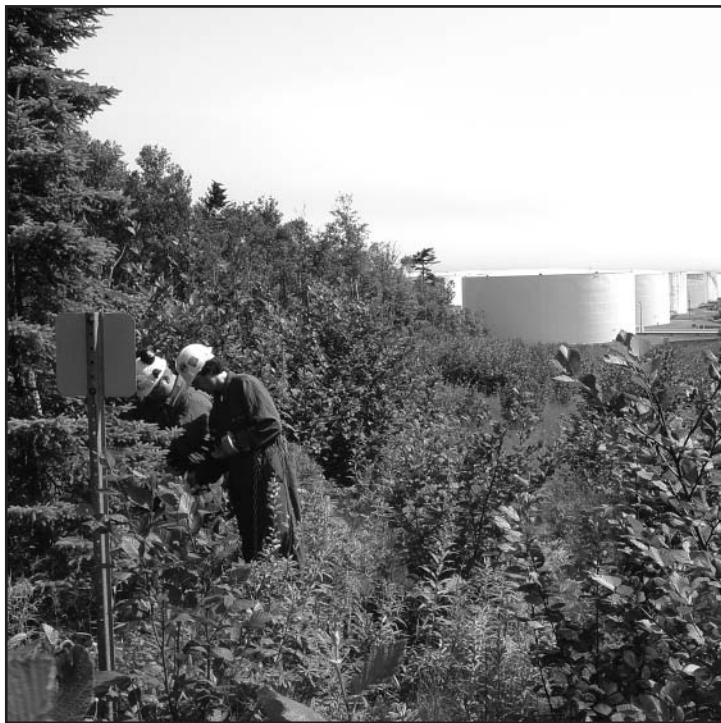
HGC Engineering performs sound surveying on one of the cooling towers.

In 2006, Irving Oil hired HGC Engineering with approval from the New Brunswick Department of Environment to complete a sound survey at the refinery and within the community. The purpose of the survey was to note key areas where noise can be reduced. Noise accounted for approximately 20 percent of the calls we received from our neighbours in 2006.

The survey included predictive modeling and real-time data collection. The data collection was carried out during normal operation, plant shutdowns, and during simulated upset conditions such as elevated flaring and steam venting.

During the testing, the flares were identified as a noise source. After some investigation, changes were made to how steam is sent to the flares, which reduced noise levels significantly. Two flare tips were replaced in 2004, which helped reduce noise due to the steam used in flare operations.

A number of other locations in the refinery were identified as possible noise sources and a plan is being developed to install a number of mufflers and silencers to further reduce the noise from the refinery.



HGC Engineering prepares for noise surveying of the area surrounding the refinery.



Peter Boudreau, Console Operator, and Andrew Fairweather, Shift Processing Specialist, review flaring operations from the Central Control Room.

**Project Eider Rock:
Questions and Comments**

If you have questions regarding the proposed second refinery, please call 1-888-525-1777. Your call will be returned within 24 hours.

Stack Emissions Testing

Each year Irving Oil hires an independent consulting firm to perform emissions testing on our stacks. In 2006, Jacques Whitford spent several months collecting emissions data for many different contaminants, some of which include: sulphur dioxide, carbon monoxide, carbon dioxide, and particulate matter. They also test the temperature, moisture and flow rate in the stack.

The results of the testing are used to support the calculated emissions data that Irving Oil continually reports to the government. Unit operations can be optimized based on results from certain tests.

In March 2006, Irving Oil implemented a Five Year Plan for Source Emissions Testing. The purpose of the plan is to develop a schedule of recommended testing for the next five years for each of the stack emission sources in the refinery.

There are approximately 32 stacks at the refinery and several have a Continuous Emissions Monitor (CEM) attached, which is used to give constant readings of stack emissions. Irving Oil performs daily calibrations and audits on the CEMs to ensure accurate measurements.

The testing is usually performed near the top of the stack. Jacques Whitford employees spent several hours at a time, three to four times per day, at the top of a stack while collecting data. The stack on the Fluidized Catalytic Cracking Unit (FCCU) is nearly 200 feet high. Equipment must be raised using ropes and pulleys. The sampling location is only accessible by climbing a series of stairs and ladders.

Some samples are sent away for analysis while the rest of the data collected is interpreted. A comprehensive report is compiled for Irving Oil which is also submitted to the Provincial Government for review.

In 2007, eleven sources will be tested over a period of 4-6 weeks. Temporary platforms will be constructed to safely access certain sampling points, including the two stacks of the # 3 Crude Unit furnaces. Consultants will access these 200 foot high platforms using a large crane with a man-basket. Implementing task-specific safety procedures and the use of proper personal protective equipment will ensure the safety of personnel performing this work.



Jacques Whitford test stack emissions on the #3 Crude Unit.

Community Connections is the newsletter for neighbours of the Irving Oil refinery. *Community Connections* is published by Irving Oil several times each year. If you have suggestions or comments about *Community Connections*, please contact Bridget Sprague at 202-3000 or at environment@irvingoil.com.