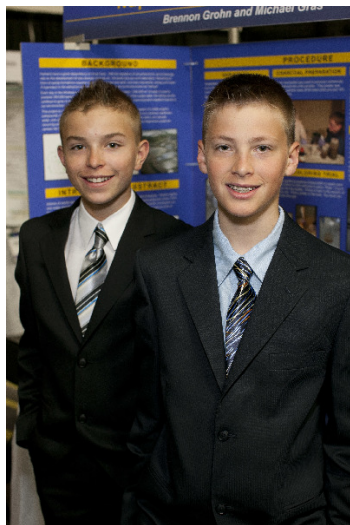


# CWSF 2011 - Toronto, Ontario



## Michael Gras, Brennon Grohn

### Effective Effluent Expurgation: Naphthenic Acids Removal

**Challenge:** Environment

**Category:** Junior

**Region:** Edmonton

**City:** Edmonton, AB, St. Albert, AB

**School:** Aurora Charter School

**Abstract:** Alberta oil sands operations provide an alternative to depleting conventional oil sources. Despite aggressive water recycling, the bitumen extraction process generates residual effluent ponds that contain harmful naphthenic acids. The "Effective Effluent Expurgation: Naphthenic Acids Removal" investigation explores the use of activated carbon adsorbents and polymeric ion exchange resins to reduce levels of naphthenic acids found in oil sands tailings ponds water.

#### Biographies

Michael - My name is Michael Gras and I am representing the Edmonton Region with my science fair project the removal of naphthenic acids in oil sands tailing ponds. I enjoy working on projects regarding environmental science. My esteemed college and I won six awards in this fair. I attend Aurora Charter School in Edmonton and am in grade 8. Other than working on the science fair project, I also enjoy playing soccer and guitar. I have danced with Shumka Ukrainian dancers and have performed at many concerts and have even performed for the mayor of Edmonton. One of my most enjoyable hobbies and quickly becoming a passion is working with magic. I am also a...

Brennon - Brennon Grohn is an inquisitive eighth grader who loves science, sports, magic and the outdoors. This past winter, he and 12 classmates embarked on a marine exploration trip aboard a research vessel in the Sea of Cortez, Mexico. There, he enjoyed many experiences relating to biological science. At the 2011 Edmonton Regional Science Fair, Brennon's third appearance, he received several awards for his project, "Effective Effluent Expurgation: Naphthenic Acids Removal." Accolades included the Earth and Environmental Sciences Award, Christie Communications Excellence in Communications Award, ACPA Rick Dillen Memorial Award (sponsored by the...

#### Awards

#### Value

Excellence Award - Junior - Bronze Medal Sponsor: Youth Science Canada	\$300
The University of Western Ontario Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Western Ontario	\$1 000
<b>Total</b>	<b>\$1 300</b>