



FIRST OPEN HOUSE - ATTENDEES QUESTIONS & ANSWERS

June 23, 2005

1. When will the Extension be Operational?

The extension is being constructed in four phases. Phase I is on track to be operational for the end of October 2005. Phase II will begin construction in spring 2006 with commissioning in September 2006. Phases III & IV are scheduled for 2011 and 2013 respectively.

2. How many Gallons do the Phosphogypsum Ponds Hold?

At normal operating conditions the phosphogypsum ponds will hold 120 million gallons of pond water. Capacity of the phosphogypsum ponds is 160 million gallons.

3. How Much Water does the Groundwater Intercept Collect at the Phosphogypsum Ponds?

The interceptor trench at the phosphogypsum ponds collects between 75-100 gallons a minute of water.

4. Explain the Growth of the Pond & Surface Area Required for Annual Production, and Pond Life (New & Old).

The Redwater operation creates 1.5 million tons of gypsum by-product per year. From a pond growth and surface area perspective, the growth is equivalent to 130 acre-feet per month. That is, we will theoretically fill an area of 130 acres in size one foot high every month. As the ponds grow over time, the constructible building surface area decreases requiring larger and deeper storage ponds. This means that we have an area of about 33 acres 4 feet high instead of 130 acres one foot high. The pond extension allows us to lower the annual dike height construction to match the available building material and spring / summer construction window. The existing ponds growth will slow and Phase I & Phase II will match up to the existing pond prior to construction of Phase III & Phase IV.

5. Water on Close Loop - How does Agrium Manage Water if the River goes Dry? How Much Water does Agrium take from the River?

It is unlikely that the North Saskatchewan River will run dry. Depending on the time of year, approximately 4 million US gallons per minute flow past the site. The Agrium Redwater Facility removes approximately 5,000 US gallons per minute (0.1% of the river's overall flow) for its operation and returns about 1,000 US gallons per minute back to the river.

6. Why is Agrium not Giving Away Fertilizer at the Open House?

We did in fact consider product as a give away. Unfortunately, as a commodity business and facility, the smallest bags that we have are 25 kg, which is just physically too big to hand out.



7. Explain the Phosphoric Acid Process & the Phosphate Rock Supply in More Detail.

The base process of producing Phosphoric Acid has not changed much over the years, but technology has increased the plant's efficiencies, both from a production and environmental standpoint.

Phosphoric acid is produced from phosphate rock (sand like particle). In a controlled environment, Agrium mixes that phosphate rock with Sulphuric Acid and the reaction between the two materials creates a liquid (30% phosphoric acid) and solid (gypsum). Agrium then removes the solids (gypsum), which is then pumped to phosphogypsum ponds and stores the liquid 30% Phosphoric Acid. The 30% Phosphoric Acid is concentrated by evaporating some of the water to create a stronger phosphoric acid. This concentrated acid is utilized to produce a dry granular fertilizer (11-52-0).

When the plant started back in 1968, the phosphoric rock supply was from central Florida and was shipped by boat to Vancouver and then railed to the Redwater plant. In the mid 1980's, Agrium switched to a higher-grade phosphate rock from Africa. Primary suppliers of this phosphate rock were countries on the west central side of Africa and included Senegal, Morocco, and Togo. This rock was shipped by boat to a Vancouver terminal and then delivered to Redwater by rail. The rock supply was changed in 1997 to our Agrium mine at Kapuskasing, Ontario and is delivered to plant site by rail.

8. Phosphogypsum Pond Extension - Explain Slurry Wall and its Construction.

A slurry wall or soil bentonite cut off wall is an inactive groundwater control system. Once constructed, it is an impervious layer preventing ground water migration. It is constructed by a large hydraulic excavator, which digs a narrow trench 30 inches wide down to the clay shale layer (keying to 3 foot depth). A mixture of bentonite and water, referred to as light slurry, creates hydraulic pressure on the sides of the excavated area to prevent collapse of the sides. The excavation spoils are mixed with the light slurry and additional bentonite to create a heavy slurry that is back filled into the trench at an 8 to 1 slope, displacing the light slurry and forming the wall as it solidifies. The solidification takes approximately 30 days.

9. Explain the Phosphogypsum Pond & Phreatic Water Table.

The ponds are built out of gypsum. The gypsum is transported to the ponds as a slurry, which is gypsum mixed with water at a 15% weight by volume ratio. Once at the ponds the slurry fills the area with the gypsum particles settling out of suspension. The water decanted from the pond and returned to the plant to form a closed loop system. The water table in the ponds is called the phreatic water table, and generally follows the surface contour of the pond.

10. What Alternative Uses are there for Gypsum & When will Agrium have an Alternative Use in Place?

We are continuously looking for alternative uses for our gypsum to minimize waste and maximize beneficial use. However, we have not yet identified a viable alternative to consume any significant quantities. Each time there is a possible use for our gypsum we investigate it thoroughly with various Government Agencies such as Alberta Agriculture, Agriculture



Canada, Alberta Environment, as well as private industry. At this time many avenues are being investigated and some of the areas that we have explored include:

- a) Oilfield Reclamation
- b) Composting at Feedlots
- c) Tarsands Tailings Settling and Consolidation
- d) Soil Treatment
- e) Set Retarder in Cement.

11. What is SIP?

SIP stands for Shelter-in-Place and is what you should do to protect yourself in the event of a hazardous materials emergency - which means you should:

- a) Go inside a building. Listen to TV or radio for information.
- b) Close all doors and windows. Seal with duct tape or wet cloths.
- c) TURN OFF air conditioners, furnaces and fans.
- d) DO NOT USE fireplaces. Extinguish fire. Close damper.

You may ask - why not evacuate? In some cases, evacuation is the better thing to do. However, evacuation could increase your chances of being exposed to the airborne chemical hazard. Evacuation is also more time consuming. The decision to evacuate or Shelter-in-Place will be made by local emergency authorities

Emergency management officials have used sheltering in place for many years. It was actually developed by fire departments as a way for the public to protect themselves during a chemical release until help arrives. Shelter-in-Place has been shown to be a safe response to a hazardous material release of three hours or less. Houses built for winter conditions are especially suited for Shelter-in-Place. For the most part, they are tightly constructed and provide a good protective barrier against airborne chemicals. Shelter-in-Place techniques are also effective because they are easily and quickly accomplished.

If you hear the Shelter-in-Place instruction on the radio or TV, or if you have received a telephone call from the Northeast Region CAER Update Line from any of the surrounding member industries or municipalities you will be advised to go indoors and turn on your radio to find out what you should do. Or, if you smell a strong or unusual odor and you don't know where it's coming from, go inside and begin Shelter-in-Place procedures while you listen to the radio for information or call the Update Line at 1-866-653-9959.

If you are interested in receiving more information on Shelter-in-Place we would be pleased to send our Shelter-In-Place video, fridge magnet and additional supplementary materials.

12. Fertilizer Truck Clean Out - Can the General Public Pick Up?

We discourage the public from direct access to this area due to safety concerns. However, if someone is interested in this material, we will take his or her name and contact information. If an opportunity arises to recover some material we will make suitable arrangements on a trial basis.

13. Do you offer tours of the facility?

We do offer tours of the facility.



14. Crime Watch Fan Out - Connect with Industry & Municipal Telus Geomatics

This question was asked to see if there was a possibility of using the Industrial Update Line and include local crime watch. We think that is something that should be pursued and discussed with the local municipalities, as we think that is where the connection and initiation should occur. It would have the potential to lower the cost to local crime watches in the area who would have their local call out system.