



## **N-VIRO SOIL AMENDMENT-FREQUENTLY ASKED QUESTIONS**

### **1. What is the N-Viro Soil process?**

Alkaline materials are added to dewatered biosolids, mixed, dried, cured and stored, as required. The alkaline materials (cement-kiln dust and lime) raise the temperature and pH of the mixture to levels that together destroy the pathogens, creating a Class A product that poses no public health or environmental risk.

### **2. How do we know that the pathogens are destroyed?**

There is a regular sampling and analysis program at each of N-Viro's operating facilities.

### **3. What is the difference between Class B and Class A biosolids or processes?**

Class B biosolids are those that undergo a minimal level of treatment and rely on natural die-off of pathogens after they are applied on the field.

Class A biosolids undergo a rigorous treatment process that destroys the pathogens at source so that the product is pathogen free as it leaves the processing facility.

The maximum acceptable metals and pathogen concentrations for Class A Biosolids is more restrictive than Class B.

### **4. We hear a lot about metals in biosolids and therefore, in biosolids-derived products. What governs the allowable levels?**

Each of the provinces has its set of guidelines as does Agriculture Canada under its Federal Fertilizers Act and Regulations. The Halifax product meets both the former Exceptional Quality(EQ) guidelines (now Class A - Revised Guidelines for Land Application and Storage of Municipal Biosolids in Nova Scotia - July, 2009) set by Nova Scotia Environment, and Agriculture Canada's guidelines for land application.

**5. We also hear concerns about exotic chemicals and personal care products found in biosolids. Are they of concern?**

The fate of such substances where biosolids have been land applied have been extensively studied. The conclusions of the studies are that at the levels found there is no risk to public health or the environment and those that are found decompose very rapidly in the natural environment.

**6. Some environmental groups say that there are metals such as thallium in the product. Is it a concern here?**

Thallium is present at measurable levels virtually everywhere in the earth's crust. The Halifax product has been analyzed for the metal and its concentration was below the detectable level. It is not a concern.

**7. What are the uses of the product?**

To date most of N-Viro Canada's product has gone into the agricultural market but it is an excellent material for accelerating the compost process, mixing with other soils to produce topsoil or for gravel-pit or mine-site rehabilitation. N-Viro Soil Amendment is not applied to food crops in Nova Scotia.

**8. What are the benefits to the agricultural sector?**

It is used primarily as an alternative to agricultural limestone to reduce soil acidity to optimize crop production and at the same time adding significant amounts of nitrogen, phosphorus, potassium, calcium, sulphur and pasteurized organic matter.

**9. Is the N-Viro product more economical than conventional farm products?**

Yes. The same benefits are achieved with the N-Viro product for about a third the cost of commercial products providing equivalent cropping benefits.

**10. Who is responsible for applying the product?**

N-Viro Canada has contracted with an established farm products' distributor. The distributor will be responsible for its application, ensuring that it will be applied professionally and only at agronomic rates.

**11. How will we know where it has been applied?**

The distributor keeps records which include the location, amount, and dates of application. Each site will have a Nutrient Management Plan in place prior to application. A farmer's nutrient management plan is their personal farm plan and is often sensitive competitive information.

**12. Will there be prior notification to those areas where land application is to take place?**

N-Viro has retained the services of a communications firm to oversee all required communications. A communications strategy is in place to ensure that appropriate notification will be provided to all adjacent properties.

**13. Are we likely to have a repeat of the Colchester County incident of a few years ago?**

No. If the materials that were land-applied in the area had been processed using the N-Viro Soil technology, then applied, the problems would never have arisen.