Frequently Asked Questions on Naturally Occurring Radioactive Materials Managed as Part of the Route 104/Lewiston Road Reconstruction Project 8/31/2011

(This information is provided at the request of the City of Niagara Falls in response to numerous questions they have received from local residents and members of the press.)

Where did the slag found underneath Route 104 come from?

The slag in the road bed is residues that originated from industrial processes prevalent in the area several decades ago. The most likely source for the slag under Route 104 is the phosphate industry.

What radioactive isotopes are present in the slag?

The majority of the slag contains natural Uranium, Radium and associated decay products. There is one small area of Thorium soil contamination.

The slag material contain radioactivity. How dangerous is it?

The slag contains slightly elevated concentrations of naturally occurring radioactive materials. A group of scientific experts, gathered by the New York State Department of Health, looked at the slag issue in 1980 and concluded that there was no concern for public health.

If this slag does not pose a health threat in its current location, why is it being removed?

The reason for removing the slag from its current location is not related to its radiation content. The Route 104 work plans call for the removal of existing road bed materials to specific depths and lateral extent as part of the roadway reconstruction. A substantial volume of this slag material is within the specified limits of the excavation.

What is done with the materials once removed from the roadbed?

The slag is separated from the rest of the roadbed material during the excavation process. Due to the unintended concentration of naturally occurring radioactive materials in the slag it is subject to DEC radiation regulations. NYS solid waste disposal regulation prohibit disposal of wastes subject to the Department's radiation regulations. Therefore, even though it was removed from the ground for purposes unrelated to its radioactive content, once exhumed it is required to be disposed of in a facility permitted to accept naturally occurring radioactive materials.

If the materials cannot be disposed of in New York, where are they being sent?

The contractor has chosen a permitted disposal facility in Michigan.

What level of radioactive material in the roadway is considered "clean" or safe?

As laid out in project work plans, materials considered unimpacted by the slag must not be distinguishable from background levels of natural radioactivity. This material is considered "clean", and can be used for fill or disposed of without restrictions. All material that needs to be removed in order to carry out the roadway reconstruction is segregated into impacted and non-impacted segments, with all impacted material going for proper disposal.

Why is slag material that is not within the scope of the road project allowed to remain?

As described above, the DOH has studied the presence of this slightly elevated material and determined that it poses no public health threat as it exists in the ground. There is no public health driver for removal of slag. The only driver for removal is what is required for road reconstruction purposes, and there is no reason to "chase" the slag for additional removal efforts. The only reason for segregating the slag from the road project is that NYS solid waste disposal regulations prohibit the disposal of radioactive materials in NYS solid waste landfills.

How much slag material is being removed?

Initial estimates within the project boundaries were estimated to be around 550 cubic yards. Additional materials encountered during reconstruction will make the final amount somewhat higher. Final volumes will be determined at the closure of the project.

If there are radioactive materials present, is there a concern over the dust being kicked up during the road reconstruction?

According to approved work plans, the contractor should be employing dust suppression techniques associated with any excavation/construction job.

In addition, regular air sampling and personnel monitoring are being performed and results have not been observed in excess of background values.