

Blackwood, Inc. & WeCare Organics, LLC Tremont, Pennsylvania

Blackwood, Inc. is the owner of a 2,200 acre former coal mine site near Tremont, Pennsylvania, in Schuylkill County. The company bought the site, which had been decommissioned in the mid-1990's, originally planning to restart mining activities there. However, the coal that Blackwood was extracting had a very low BTU value. As a result, they decided to build more roads on the land to access new portions of the site. Blackwood is also interested in reclaiming the site for possible future real-estate development.

To build the roads and reclaim the site, Blackwood turned to EarthRes Group to engineer and design the project and WeCare Organics, LLC to administer the project and manufacture and apply the necessary materials. The decision to use foundry sand was made because it would keep WeCare from having to crush rock for the roads and because WeCare Organics specializes in beneficial reuse of biosolids and other industrial byproducts. The site owner itself – Blackwood – contracts directly with the foundries with WeCare's assistance, but WeCare administers the contracts.

The foundry sand currently comes from five Pennsylvania foundries within about 75 miles of the site. Two other foundries have been approved for this project, but have not used the Blackwood facility to date. The sand is marketed by the Pennsylvania Foundry Association (PFA) and covered under their general permit. All of the sand is green sand, and the foundries and WeCare share transportation responsibilities and costs. The amount of sand coming from each foundry varies. While some foundries deliver sand to the site on a daily basis, others only make the trip about every two to three weeks.

The sand usually arrives on site in a roll-box, where it is dumped out and mixed by a bulldozer with mine overburden in a roughly 1:1 ratio. It is then spread out and packed down to create a road base. To date, WeCare Organics has used about 30,000 tons of sand to make just a few miles of road. While they could potentially build up to 80 miles of road, the small volume of sand that they receive generally prohibits them from building more than about ten feet of road per day. Starting in 2007, the foundry sand will also be used to manufacture soil for both off-site sale and for reclaiming portions of the site that have already been mined. WeCare hopes to eventually be producing 100,000 cubic yards of soil per year at the Blackwood site.



Both WeCare Organics and the participating foundries experience benefits from this project. As mentioned before, WeCare avoids having to quarry and crush rock for the road-building activity. Additionally, the foundries pay less to send their sand to WeCare Organics than they would to send it to a landfill. The foundries also often save on long-distance transportation costs.

The primary challenge associated with the project has to do with regulating it. It took a great deal of time to get both the project and the byproduct sources approved. Furthermore, though the sand is covered under the PFA's general permit, it must also meet the requirements of a PADEP mining permit, and the cost and time requirement necessary to meet this mining permit are the same whether the hauler is delivering material once a day or once a month. This often discourages some of the smallest volume haulers from participating in the project.

Finally, as alluded to earlier, WeCare currently receives only a small volume of foundry sand for this project on a regular basis, which means that the current road-building activities progress at a very slow pace. WeCare is hoping to alleviate this problem by seeking out new foundry clients with higher volume spent sand streams.





Case Study: Pennsylvania Foundries: Foundry Sand for Road Base and Manufactured Soil

Personnel

Foundries: McConway & Torley Corporation, Leed Foundry, Hamburg Manufacturing, Fairmount Foundry, Unicast Company, Pennsylvania Foundry Association (marketing organization)

Property Owner: Blackwood, Inc.

Contract Administrator/Operatable: WeCare Organics, LLC

Engineers: EarthRes Group

Regulatory Agencies: PADEP – Mining Office

PADEP – Solid Waste Office

Site

Location: Tremont, Pennsylvania

Site Description: A 2,200 acre former coal mine site is being reclaimed with foundry sand. The sand is currently used to build roads within the property, but it will also be used to manufacture soil for the site starting in 2007.

Materials Utilized

30,000 tons of green sand have been used to date for building roads. The sand is blended with mine overburden to make road base. Green sand will also be used when WeCare begins manufacturing soil for the site in 2007.

Project Advantages and Disadvantages

Advantages Include:

- Foundries save on disposal costs compared to landfilling
- Foundries are able to make use of a dedicated site that should be available for some time into the future
- WeCare avoids having to crush rocks to build the roads

Disadvantages Include:

- Due to regulatory issues, it takes a significant amount of time to get approval for the project and byproduct sources
- Permitting low-volume haulers is as costly and time-consuming as permitting high-volume haulers
- The foundries provide a relatively small volume of sand, meaning that application takes place at a slow rate