

# Pennsylvania Department of Environmental Protection

## 400 Waterfront Drive Pittsburgh, PA 15222-4745 October 7, 2009

## **Southwest Regional Office**

412-442-4000 Fax 412-442-5885

Stanley R. Geary, Esquire CONSOL Energy, Inc. CNX Center 1000 CONSOL Energy Drive Canonsburg, PA 15317-6506

Re: Request for Information

Industrial Waste Consol Energy Morris Run Shaft Blacksville No. 2 Mine Greene County

Dear Mr. Geary:

The Department of Environmental Protection ("Department") is conducting an investigation of the recent fish kill in Dunkard Creek. The Department has obtained and reviewed analytical results that indicate that the discharge into Dunkard Creek from Outfall 005 at the Blacksville No. 2 Mine contained very high concentrations of total dissolved solids ("TDS") and chlorides and may have contributed to the stream conditions. The Department believes that, in addition to investigating the impact of these direct discharges to the Creek on the fish kill, it needs to obtain an understanding of the inter-connections between the various mine pools in the watershed, particularly of the Blacksville No. 1 and the Blacksville No. 2 Mines. The Department also believes it is useful to evaluate the contribution of the disposal of wastewaters high in concentrations of TDS and chlorides into the Morris Run Borehole to this event. Because the Blacksville No. 2 Mine, Blacksville No. 1 Mine and the Morris Run Borehole are all owned and operated by Consol, we are requesting your assistance by supplying the information requested outlined.

#### Outfall 005

- 1. Please provide the Department with a copy of all current NPDES permits and Mine Activity Permits issued by the West Virginia DEP for the Blacksville No. 2 Mine, and all associated facilities, including any coal refuse disposal facilities.
- 2. Please provide a copy of the NPDES Permit application for the Blacksville No.2 Mine Site along with a flow diagram depicting the conveyance of water to each outfall at the Site and each discharge from the Site.
- 3. Please provide a copy of all discharge monitoring reports submitted for all outfalls at the Blacksville No. 2 Mine Site and all associated facilities for the past five (5) years. Also for that same time period, please provide a copy of the results of all process control sampling that was obtained during the operation of the treatment facilities at the mine. In addition, if this information is not included in your discharge monitoring reports, please provide a copy of all sludge disposal records for the past five (5) years.

- 4. Please provide a description of each outfall at the Blacksville Mine No. 2 site and the source of water discharged via each outfall prior to the date you first became aware of the fish kill on Dunkard Creek.
- 5. Please explain the high chloride concentrations in the Outfall 005 discharge.
- 6. Please provide a copy of all analytical results of any treatment plant influent samples taken at each Outfall at the Blacksville No. 2 Mine site.
- 7. The Department understands that although Consol has ceased conveying pumped water from the Blacksville No. 2 Mine to Outfall 005, there remains a discharge from Outfall 005. Please identify the source of this water.
- 8. a. Is Consol still pumping water from the Blacksville No. 2 Mine? If so, please identify where such water is being pumped. If the water is being pumped to another portion of the mine, please provide a mining map, depicting the features of the Blacksville No. 2 Mine that allow Consol to store this water. In addition, please describe how Consol is monitoring the water elevations in the mine pool where this water is stored and in adjacent mine pools.
  - b. For the water currently being pumped from the Blacksville No. 2 Mine that formerly discharged from Outfall 005, how long can the water be stored at its current location before it needs to be discharged or hauled off-site?
- 9. If Consol is no longer pumping water from the Blacksville No. 2 Mine, please describe how Consol is monitoring the water elevations in the mine pool where this water is stored and in the adjacent mine pools. Please provide a mining map, depicting the features of the Blacksville No. 2 Mine that allow Consol to store this water.
- 10. When the water cannot be stored any longer under either scenario in Items 8 or 9 above, and has to be discharged from the mine, what is Consol's plan for treating this mine water prior to discharge or taking other measures to assure that there will be no impact on Dunkard Creek or other receiving waters?
- 11. Please inform us what will happen to the mine and the operations at the Blacksville No.2 Mine if pumping is not resumed. If pumping is not resumed, please inform us where and when the mine pool would discharge.
- 12. Have there been any changes in the pumping scheme in conjunction with the operation and activities in the Blacksville No. 2 Mine? For example, it is our understanding that approximately 18 months ago, Consol ceased pumping water with high concentrations of chloride to the Beaver Pond and ceased discharging water from the Beaver Pond via Outfall 003, but instead pumped the water with high concentrations of chloride to the Velone Pond and eventually discharged this water via Outfall 005. Please explain the reason for revising your pumping scheme for this area and any other areas at the site over the last five (5) years. As a result of these revisions, please inform us whether you have applied for, and received, an amended discharge permit. Also please provide a flow diagram depicting the conveyance of water at the site prior to the cessation of pumping mine water to the Beaver Pond.

## General Information on Mine Pool Management

- 1. To obtain a comprehensive picture of the management of the mine pools in the area, please provide a flow diagram of how the waters in the mine pools are pumped between Blacksville No. 2 Blacksville No. 1, Humphreys, Shannopin and other adjacent mines. The flow diagram should include the volumes of water moved from one point to another until the point of final discharge. Please also describe the factors that Consol uses to determine the pumping rates and mine pool elevations.
- 2. Please provide a copy of the NPDES Permit and NPDES Permit application for each point of final discharge from the mine pools listed in Item 1 of this section and please provide a compilation of all discharge monitoring reports for each such discharge for the last five (5) years.
- 3. Please provide all mine pool monitoring data obtained during the last five (5) years for each mine pool listed in Item #1 of this section, above, and depict the locations of those monitoring locations on a map.
- 4. Please provide maps for the entire Blacksville No. 2 Mine and the entire Blacksville No. 1 Mine in a scale with sufficient legibility to allow a determination of the perimeter barriers between the mines.

#### Blacksville No. 2 Mine

- 1. During the course of operating the Blacksville No. 2 Mine, did Consol mine through any gas wells? Please provide the location of each such gas well and the dates of when such mining occurred.
- 2. The Department understands there are two sources of water in Blacksville No. 2 Mine: water that is coming from the area of Blacksville No. 1 entering into Blacksville No.2 which is reportedly pumped out continuously, and sources from another area adjacent to the Blacksville No.2 Mine. For reference purposes, we will refer to the first source as the Wana Pump and the second source as the Skip Hoist Pump. Please provide estimates of how much water is generated from each source on a daily basis, indicating whether the volume changes seasonally. Please identify how many pumps are used to pump the water from each source and provide the pump sizes.

Please describe how the volume of each source of water is measured. Please indicate whether these two sources within Blacksville No. 2 are physically isolated and treated separately. If so, please describe how these sources are physically isolated. In addition, please describe how these separate sources of water are managed, monitored, pumped and treated.

3. It is our understanding that the Skip Hoist Pump is pumped for approximately four months out of the year. Please depict this area of the mine on a map, including a pumping and piping schematic, and its location relative to Outfall 005. Please identify the months of the year that water was pumped from this location over the last five (5) years and the volume of water that was pumped during each month.

Is this area of the mine currently being used to store water that was previously being discharged via Outfall 005?

4. We have been informed that some water from Blacksville No. 2 Mine is conveyed by pipe to Kuhntown to use in the bathhouse. Please confirm whether this information is correct. If so, is the water treated prior to use? What are the uses of this water? What testing is conducted for that water? What portion of the mine does this water come from? Where is the water used at the bathhouse ultimately discharged?

## Blacksville No. 1 and Blacksville No. 2 Hydraulic Relationship

- 1. Does the mine pool of Blacksville No. 1 leak into the mine pool of Blacksville No.2? Is the Blacksville No. 1 mine pool pumped to Blacksville No. 2 mine pool? Is Blacksville No. 1 mine pool pumped to any other locations? If the Blacksville No. 1 mine pool does leak into Blacksville No. 2 mine pool, then please provide any data available on the rate of leakage.
- 2. Does Consol measure the water levels against the barrier between the two mines, Blacksville No. 1 and Blacksville No. 2? If so, how often and how are the measurements taken? Please submit to the Department the previous five years of data.
- 3. It is our understanding that after the water from Blacksville No. 1 is leaked into Blacksville No. 2, this water accumulates in Blacksville No. 2 behind a man-made wall and must be collected and pumped ("Accumulated Water"). Please describe how this Accumulated Water is managed and monitored.
- 4. Please submit copies of the analytical data of all monitoring of this Accumulated Water for the previous five years. If Consol has evaluated any changes in the quality of this Accumulated Water over time, please provide a copy of such evaluation to the Department. If no samples of the Accumulated Water have been taken, we would appreciate your taking a sample of this water having it analyzed and submitting to the Department analytical results for TDS, chlorides, sulfates, pH, iron, manganese, calcium, sodium, alkalinity, acidity, strontium, barium, ethylene glycol, magnesium, BOD, phosphorous, TKN, nitrate-nitrite, ammonia and, if possible, algae spores.

How much Accumulated Water is allowed behind the man-made wall in Blacksville No. 2 before it is pumped?

- 5. Please submit all analytical data of any water, other than Accumulated Water, that has leaked from Blacksville No. 1 to Blacksville No. 2 taken during the last 5 years. If no samples of this water have been taken, we would appreciate your taking a sample of this water, having it analyzed and submitting to the Department analytical results for TDS, chlorides, sulfates, pH, iron, manganese, calcium, sodium, alkalinity, acidity, strontium, barium, ethylene glycol, magnesium, BOD, phosphorous, TKN, nitrate-nitrite, and ammonia and, if possible, algae spores.
- 6. Please submit all analytical data of water in the Blacksville No. 1 Mine taken during the last 5 years. If no samples of this water have been taken, we would appreciate your taking a sample of this water near the barrier between Blacksville No. 2 and Blacksville No. 1, having it analyzed and submitting to the Department analytical results for TDS, chlorides, sulfates, pH, iron, manganese, calcium, sodium, alkalinity, acidity, strontium, barium, ethylene glycol, magnesium, BOD, phosphorous, ammonia, TKN, nitrate-nitrite and, if possible, algae spores. This sample may be taken from the Morris Run Borehole.

- 7. When did mining in each mine cease in the vicinity of the barrier between Blacksville No. 1 and Blacksville 2?
- 8. Please submit a mine map showing the bottom of the coal elevation and the groundwater elevation for Blacksville Nos. 1 and 2.

#### Blacksville No. 1 Mine

- 1. Please provide an explanation of the operation of the Blacksville No.1 Mine during the past five (5) years. Please indicate in your answer whether the pumping scheme or flow of water between mine pools has changed during that time.
- 2. Please provide the dates of active operation of the Blacksville No. 1 Mine. Please state how much water was generated within the mine and how the water in the mine was managed during those operations.
- 3. Please state why the water elevation in Blacksville No. 1 is currently much lower than the water elevation in adjacent mines.

### Morris Run Borehole

- 1. Please provide as-built construction drawings of the Morris Run Borehole.
- 2. Please provide all measurements of water elevations performed in the Morris Run Borehole.
- 3. Please provide all analytical results of all water samples taken in the Morris Run Borehole. Please include the date of the sample and the depth of water at the location where the sample was taken.
- 4. Please provide a copy of any evaluation made of how the Blacksville No.1 Mine pool was to be managed with the additional flows authorized to be injected pursuant to the Underground Injection Control ("UIC") Permit.
- 5. Please state whether the Morris Run Borehole is constructed in a manner that will apply hydraulic pressure to the water in the coal seam.
- 6. Please state whether the water in the Morris Run Borehole is always above the Pittsburgh Coal seam.
- 7. Please describe the pumping scheme for ranges of elevation in the Blacksville No. 1 Mine pool. Please include the maximum and minimum pumping levels.
- 8. If you know, please identify other locations in the coal seam in Blacksville No. 1 and Blacksville No. 2 where water or waste has been disposed into the coal by Consol or others. Also, if you know, please identify the type of water or waste, the person or entity who disposed of the material and the dates, exact or approximate, of the disposal.

#### Miscellaneous

- 1. Please provide a copy of the environmental impact statement completed or to be completed for a new mine Consol is planning on operating in the Dunkard Creek watershed.
- 2. Please state when Consol became aware of the fish kill in Dunkard Creek and when you began to investigate the relationship between the dischargers from the Blacksville No. 2 Mine and the fish kill. Please provide the results of any such investigation(s).
- 3. Please provide a copy of any evaluations of the impact of TDS, chloride, sulfate and any other pollutant from Consol's operations on Dunkard Creek completed within the last two (2) years.
- 4. Please provide all chemical and biological monitoring information for Dunkard Creek, within the last two (2) years that Consol has in its possession.
- 5. Please provide all flow measurements taken of Dunkard Creek during the last two (2) years that Consol has in its possession.
- 6. Please provide the date, the location, the rate, and the purpose of all water withdrawals from Dunkard Creek made by Consol during the last two (2) years.
- 7. If you have not provided this information in response to another request in this letter, please provide a copy of the NPDES Permit, NPDES Permit application and DMRs for the discharge at St. Leo.

This letter constitutes a request for information only. It is not intended, nor shall be construed, to be a final action of the Department. Also nothing in this letter is intended, nor shall it be construed, to be a waiver or limitation of any legal or equitable right the Department may have regarding this incident or these inquiries.

Please respond cooperatively to this request within thirty (30) days of your receipt of this letter. If you have any questions, please feel free to contact me at 412-442-4060. Thank you for your anticipated cooperation.

Sincerely,

Samuel C. Harper

Regional Manager Water Management