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October 29, 2017

U.S. Department of Justice  
Bureau of Prisons  
Attention: Isaac Gaston, Site Selection Specialist  
320 First Street, NW  
Washington, DC 20534

**Subject: Public Comment**  
**Final Supplemental Environment Impact Statement**  
**Proposed United States Penitentiary and Federal Prison Camp**

Dear Mr. Gaston

This letter constitutes my opinions, based on my review of the 2017 Final Supplemental Revised Final Environmental Impact Statement for Proposed United States Penitentiary and Federal Prison Camp, Letcher County, Kentucky (2017 EIS). I have been asked to perform this review by Ms. Emily Henrion Posner, attorney representing the Abolitionist Law Center.

I am a civil engineer with more than thirty years of experience in water resources, pollution, solid waste and hazardous waste fate, mitigation, migration and management. My opinions are for areas of the 2017 EIS about which I have expert knowledge. My resume is attached to this letter.

**Potential for Sediment Migration**

Site topography for the proposed facility consists of a flat to gently sloping ridgetop plateau surrounded on the west, north, and east by steeply incised stream valleys to a depth of 400 to 500 feet below the ridgetop.

Original geologic rock at the site consists of sandstone, siltstone, claystone, limestone and coal. The site has been surface mined for coal. As part of the mining process, overburden material was placed on previously mined areas with

little to no compaction. Both the type of material and the history of disturbance indicate surface material at the site that is susceptible to erosion and sedimentation.

Earthworks to create a suitable foundation for the proposed facility, as described in the 2017 EIS, are significant. About 8,613 cubic yards of spoil and 730,000 cubic yards of rock would be excavated. Rock would be removed by blasting to create a level surface. Excavated soil, rock and spoil would be transported, placed, and compacted at other site locations. The estimated volume of structural fill is 8,742,000 cubic yards. The maximum cut is estimated to be 66 feet and the maximum fill 246 feet.

I am well acquainted with the potential impacts of earthworks projects. These impacts include changing areas of drainage, concentrating storm runoff flows, erosion and sedimentation process that occlude natural drainage features, increase turbidity, and increase concentrations of coliform bacteria in downstream waterways. There is also the potential for increased pollution of heavy metals and toxic agricultural chemicals that are associated with construction as well as the historical mining, agriculture, and reclamation at this site.

The proposed mitigation for construction activities in the 2017 EIS is submission of a soil erosion and sediment control plan to the Kentucky Division of Water. While the 2017 EIS references potential control technologies like silt fences, hay bales and stabilization of steep slopes, there is no actual commitment to use any of these technologies.

Furthermore, these proposed measures are entirely inadequate for an earthworks project of this scale. Additional measures like phasing, mulching, perimeter diversion dikes or swales, sediment ponds, sediment traps, stone

outlet structures, rock berms will be necessary to prevent erosion and sedimentation,

Additional requirements for silt fences, beyond those described in the 2017 EIS would also be necessary. These requirements include that they be installed on contour at sufficiently frequent intervals; and that they be installed with j-hooks where placed down slope. In my experience these necessary features are usually overlooked in the state-wide NPDES general permits for construction-phase erosion and sedimentation control plans. These measures will also be essential to protect on-site and downstream wetlands and streams. There is also no proposal to segregate and reuse topsoil, which would reduce site impacts from construction.

A specific understanding of erosion and sediment control measures is also significantly important to adequately assess potential environmental impacts from the proposed project because of the presence of subcutaneous drains and enlarged features.<sup>1</sup> These types of features generally have no inherent capacity to filter sediment from runoff and therefore transport eroded sediment, along with any attached pollution from historical or construction site activities into groundwater.

Based on these factors, the 2017 EIS fails to adequately describe the potential environmental impacts from erosion and sedimentation. Furthermore, the

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<sup>1</sup> See, for example, ALC DSEIS Exhibit B (reduced).pdf that discusses an observation by Jonathan Hootman of two openings measuring 1 meter wide by 30 centimeters tall and 30 centimeters square.

proposed mitigation for those impacts is insufficient to prevent harm to the environment and public health.

### **Potential Impact on Human Health from Arsenic**

The National Environmental Policy Act requires that an Environmental Impact Statement address impacts on the human health, including prisoners, and the environment. Mr. Daniel Gold, geologist, determined that arsenic concentrations at the proposed site are not consistently less than background concentrations specific to the proposed prison location. Therefore, the conclusion that no further action is required is also invalid.<sup>2</sup>

Two soil samples contained arsenic measured at 7.2 and 7.79 parts per million (ppm), or milligrams per kilogram. These concentrations exceed three threshold values calculated by Mr. Gold based on U.S. Geological Survey arsenic data for Letcher County, Kentucky: 4.94 ppm (95% upper confidence level), 5.1 ppm (60<sup>th</sup> percentile) and 6.6 ppm (95<sup>th</sup> percentile). These high arsenic values at the Roxana site may be attributable to historical mining or agricultural activities. This inadequacy is not address in the 2017 EIS.

Observed arsenic concentrations also exceed three of the EPA Regional Risk Reduction Screening Levels for arsenic in soils:<sup>3</sup>

- ingestion: 0.77 milligrams per kilogram;
- dermal: 5.5 milligrams per kilogram; and
- carcinogenic: 0.68 milligrams per kilogram.

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<sup>2</sup> See ALC DSEIS Exhibit A (reduced).pdf.

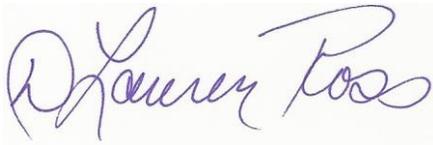
<sup>3</sup> <https://semspub.epa.gov/work/03/2245085.pdf>.

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Soil screening risk reduction measures should be performed as part of the Environmental Impact Statement process to establish acceptable limits for arsenic in residential soil for the proposed project based on both noncancer and cancer endpoints.

Thank you for your attention to these concerns.

Sincerely,



Lauren Ross, Ph. D., P. E.  
President  
Glenrose Engineering, Inc.



October 29, 2017