

# STATE OF COLORADO

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Dedicated to protecting and improving the health and environment of the people of Colorado

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Colorado Department  
of Public Health  
and Environment

June 21, 2012

Mr. Butch Gunn  
17158 Chipeta  
Montrose, CO 81403

RE:    Comments on "Letter Report – Stabilization Plan for an Unnamed Tributary to Burro Creek located on Gunn Agricultural Property in Ouray County near Ridgeway, Colorado," dated April 23, 2012 (the "Report")  
SW/OUR/BUR 1.8

Dear Mr. Gunn:

The Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division (the "Division") has reviewed the technical adequacy of the subject Report, received via electronic transmittal on April 24, 2012, by Mr. Scott Schultz of the Office of the Attorney General. The Report was prepared on your behalf by Consulting Civil and Water Resources Engineering LLC, and was signed and sealed by a Colorado registered Professional Engineer. The following are the Division's comments on the Report.

- For waste tires to be beneficially used to control erosion along drainage channels the standard engineering practice is to design a "mattress structure." The tire mattress, consisting of individual tires that are similar in size, is typically placed in a regular geometric shape (e.g., end to end, side to side, but not randomly placed into the channel), bound together with wire or cable, and anchored into the ground designed to resist a calculated force. The design should be sealed by a Professional Engineer. The tire mattress structure is permissible for erosion control in several other western states, including New Mexico<sup>1</sup>. New Mexico<sup>1</sup> allows a tire mattress structure to be used for erosion control in drainage channels. New Mexico, however, requires the tire mattress structure be designed and constructed in a manner similar to a retaining wall, as well as permitted through the New Mexico Environment Department and other agencies as applicable. The design of the tire mattress structure must also be sealed by a Professional Engineer registered in New Mexico.
- In the Hydrologic Conditions section of the Report, it is stated that the storm event was 2.4-inches of precipitation, based on the NOAA Atlas 2, Volume III. The Division's interpretation of the NOAA map is that the 100-year, 24-hour storm event at the Gunn property is 3.0-inches, rather than the 2.4-inches used in the Report. As discussed above, a design storm greater than the 100-year, 24-hour

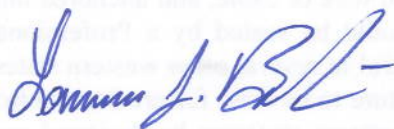
<sup>1</sup> <http://www.nmenv.state.nm.us/swb/tires.htm>

event, must be used for a proper evaluation of the random waste tires' ability to resist erosion and remain stable. However, if a map or drawing is being used as a basis for the analysis, standard engineering practice is to include the map or drawing, with the subject property shown, for Division review.

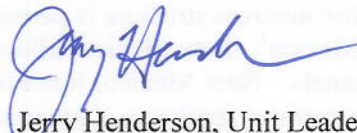
- The Hydrologic Conditions section of the Report states that the soils used were assumed to be "Hydrologic Group D" and the vegetative cover was based on Earth Satellite Imagery from Google. The Division is not familiar with the classification system used to designate the soils "Hydrologic Group D" or of the significance of "Hydrologic Group D." A copy of the classification system reference and the Google imagery utilized must be included in the Report for Division review.
- The output data sheets from the modeling results must be included in the Report. Standard engineering practice is to provide the entire technical basis for Division review, so that the modeling summary statement: "...the depth and velocity... was less than one foot and less than seven feet per second," can be supported.
- Other conclusions presented in the Report, such as "*The existing and proposed vegetation is able to withstand this depth and velocity*", and, "*The soil cover, channel grading and vegetative cover are effective...*" also require a further technical basis.
- The minimum standards in Section 8 of the Solid Waste Regulations state that beneficial use projects must comply with all local laws and ordinances. Therefore, in order to be approvable by CDPHE, the Report must satisfy the requirements of Ouray County. In addition, in correspondences dated October 12, 2011 and November 15, 2011, the U.S. Army Corps of Engineers (USACE) has asserted jurisdiction over portions of the subject property, and compliance with USACE requirements may restrict the options available to you for beneficial use of tires at this site.

If you have any questions regarding the technical aspects of the comments discussed above, please contact Larry Bruskin at 303-692-3348 or email at [larry.bruskin@state.co.us](mailto:larry.bruskin@state.co.us), or next steps regarding the Division's Compliance Advisory, Jerry Henderson at 303-692-3455 or email at [jerry.henderson@state.co.us](mailto:jerry.henderson@state.co.us).

Sincerely,



Lawrence J. Bruskin, P.E.  
Solid Waste Permitting Unit  
Solid Waste & Materials Management Program  
Hazardous Materials & Waste Management  
Division



Jerry Henderson, Unit Leader  
Solid Waste Compliance Assurance Unit  
Solid Waste & Materials Management  
Program  
Hazardous Materials & Waste Management  
Division

cc: Ouray County Board of Commissioners  
Ms. Connie Hunt, Ouray County Administrator  
Mr. Ramsay M. McDermid, P.E., Consulting Civil and Water Resources Engineering LLC  
Mr. Scott Schultz, AGO