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**State of Utah**  
DEPARTMENT OF NATURAL RESOURCES

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**Technical Analysis and Findings**  
**Utah Coal Regulatory Program**

**PID:** C0070022  
**TaskID:** 4501  
**Mine Name:** SAVAGE COAL TERMINAL  
**Title:** CULVERT EXTENSIONS

**Operation Plan**

**Hydrologic Diversion General**

*Analysis:*

The Permittee is proposing to lengthen and join culverts C-5 (24") to culvert C-7 (24") at the north end of the crude oil loading area. A 24" to 18" reducing "T" will also be installed to connect in culvert C-6 in this same area. The need to do this is to eliminate a hole where the inlets and outlets of the three culvert s meet, so that the danger of oil transporting trucks leaving the area do not roll over into it. Thus, the reason is for truck safety. R645-301-534.340 requires that road culverts be designed, installed, and maintained to sustain vertical soil pressure, passive resistance of the foundation, and the weight of the vehicles using the road. Table 7-25, as submitted with Task ID # 4501 contains the revised lengths for the three culverts involved. Revised Plate 7-2, Savage Hydrology Map, shows the location where the 3 culverts will be joined. All disturbed area water volumes (volumes will not change) will continue to eventually report into Pond #6, where they are treated prior to discharge off the permit area (UPDES 001).

phess

**Hydrologic Siltation General**

*Analysis:*

The proposed amendment to add additional sections of culvert to the existing drainage system will not add any additional sediment to the system and should reduce the mobilization of sediment.

khoffman

**Maps Certification Requirements**

*Analysis:*

R645-301-512.140 requires maps and cross sections depicting locations of each water diversion...conveyance (See R645-301-731.720) be prepared and certified under R645-301-512. The revised Plate 7-2 proposing culverts C-5 to C-7 (both 24" dia.) be connected with a "T" to allow connection with culvert C-6 (18" dia.) was submitted as part of Task ID # 4501. . The same flow volumes will report to the main culvert which has always reported to the SE corner of Pond 6, where the flows are treated by retention / settling prior to reporting through UPDES outfall 001. thence to an un-named ditch reporting off the permit area to the Price River. The need to join these three culverts is to eliminate the hazard from the open hole to trucks traveling through this area. Plate 7-2 was re-certified by Mr. Dan Guy, Utah registered professional engineer on January 13, 2014.

