

#3731
R

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

January 31, 2011

TO: Internal File

THRU: Priscilla Burton, Lead *PWB km SOS*

FROM: Ingrid Campbell, Environmental Scientist II *IC*

RE: Discontinue Macroinvertebrate Surveys, Canyon Fuel Company LLC, Skyline Mine, Permit # C/007/0005 and Project #3731

SUMMARY:

On January 26, 2011 the Division received an application from Canyon Fuel Company to discontinue macroinvertebrate sampling in James Canyon and Burnout Canyon for the Skyline Mine. A total of five spring and fall surveys have been conducted between 2000 and 2008. Mining under James and Burnout Canyons was completed in 2002 and 2003 respectively. Subsidence monitoring for both canyons was complete in 2006.

This application is recommended for approval.

TECHNICAL MEMO

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

FISH AND WILDLIFE RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.21; R645-301-322.

Analysis:

James Canyon and Burnout Canyon streams were sampled by Dr. Dennis Shiozawa between 2000 and 2008. Spring and fall 2000 and spring 2001 results can be found in the 2001 annual report. These reports act as baseline data for the streams prior to being undermined and included seasonal variations. The Burnout canyon data decreased over the time period which was attributed to drought.

Drilling and pipeline construction activities occurred within the James Canyon Drainage in fall 2001. The 2002 sampling showed a slight decrease in taxa for both James and Burnout (which had no activity) and therefore the decrease were not attributed to the construction. Extended drought and reduced trout population density were attributed as the main causes for the decrease. The decreases were small and did not indicate a strong directional trend.

Mining was complete in the James Canyon area in 2002 and in the Burnout Canyon area in 2003. These years' macroinvertebrate survey reports can be found in the 2005 annual report. The fall 2003 data showed a marked increase in macroinvertebrate density in both streams. Dr. Shiozawa suggested that possible causes of the increase were accuracy in counts and a decreased spawning fish population due to the previous years' drought. Increased habitat quality was indicated in both streams and a record high diversity was shown in Burnout Creek.

Dr. Shiozawa conducted the final macroinvertebrate survey for James and Burnout Canyons in 2008. Both creeks had a decrease in taxa and density for this sampling period but were still within the expected range. Biomass in Burnout Canyon was low in fall 2007 but normal in 2008. James Canyon creek biomass was normal in the fall of 2007 and low in 2008. Causes of low values within Burnout creek were attributed to the stocking of small tiger trout. Low values in James Canyon creek were attributed to scouring from over-bankfull discharge and a reinvasion of trout in the stream.

Dr. Shiozawa concluded in all reports between 2000 and 2008 that no adverse changes in the macroinvertebrate population occurred due to mining. Subsidence monitoring for both canyons was suspended in 2006 and no further effects from undermining are expected. Also, the mine workings below the canyons have been inundated with water since 2004 which further reduces the potential for any adverse impacts.

The permittee updated page 2-71 of the M&RP to indicate that surveys within Burnout and James Canyon are complete. The permittee also updated table 2.8-1 to show that as of fall 2007 and spring 2008, macroinvertebrate survey requirements were complete.

Findings:

The information provided is considered adequate to meet the minimum regulatory requirements for this section. The macroinvertebrate surveys conducted between 2000 and 2008 showed no adverse impacts from mining and no further impacts can be expected.

RECOMMENDATIONS:

This application is recommended for approval.