GORDON CREEK
CUMULATIVE HYDROLOGIC IMPACT ASSESSMENT (CHIA)

For

WILDCAT LOADOUT
C/007/0033

In

CARBON COUNTY, UTAH

October 29, 2015
# TABLE OF CONTENTS

I. INTRODUCTION ..................................................................................................................... 1  
II. CUMULATIVE IMPACT AREA (CIA) .................................................................................. 1  
III. SCOPE OF OPERATIONS ...................................................................................................... 2  
IV. STUDY AREA ........................................................................................................................ 2  
  Geology ....................................................................................................................................... 2  
  Topography and Climate .............................................................................................................. 2  
  Vegetation ....................................................................................................................................... 2  
V. HYDROLOGIC RESOURCES ............................................................................................... 3  
  Ground Water ................................................................................................................................. 3  
  Surface Water ................................................................................................................................. 3  
VI. POTENTIAL HYDROLOGIC IMPACTS .............................................................................. 3  
  Ground Water ................................................................................................................................. 3  
  Surface Water ................................................................................................................................. 3  
VII. STATEMENT OF FINDINGS .............................................................................................. 4  
REFERENCES ................................................................................................................................. 5  

MAPS

Figure 1
Figure 2
I. INTRODUCTION

The Wildcat Loadout Facility is located in Carbon County, Utah, along the western margin of Castle Valley, approximately six miles northwest of Price, Utah (Figure 1).

The purpose of this report is to provide a Cumulative Hydrologic Impact Assessment (CHIA) for Intermountain Power Agency’s (IPA) Wildcat Loadout Facility. The assessment encompasses the probable cumulative impacts of all anticipated coal mining in the general area on the hydrologic balance, and whether the operations proposed under the application have been designed to prevent damage to the hydrologic balance outside the permit area. This report complies with federal legislation passed under the Surface Mining Control and Reclamation Act (SMCRA, Public Las 95-87) and subsequent Utah and federal regulatory programs under R645-301-729 and 30 Code of Federal Regulations (CFR) 784.14(f), respectively.

Wildcat Loadout Facility Site Description

Beginning in 1985, coal loading activities began at the Wildcat Loadout Facility, operated by Andalex Resources, Inc., a subsidiary of UtahAmerican Energy, Inc. The Division of Oil, Gas & Mining (Division) jurisdiction over the Wildcat Loadout was established by programmatic changes finalized in January 1986. The Wildcat Loadout’s permit was transferred from Andalex Resources, Inc., to Intermountain Power Agency on June 27, 2011.

The permit area comprises of approximately 123 acres, of which 12.5 acres are under a right of way agreement between the Utah Railway and the Bureau of Land Management (BLM). The remaining acreage (approximately 110.5 acres) is BLM land utilized under Right of Way agreements.

The Wildcat Loadout crushes, screens, and sorts coal trucked to the facility. The facility also has oil transloading operations, further utilizing the rail line. The Division permit was amended in 2014 to include the oil transloading operations.

II. CUMULATIVE IMPACT AREA (CIA)

Figure 2 delineates the CIA for the Wildcat Loadout Facility. The CIA includes Section 33 and the E1/2 of Section 32, Township 13 South, Range 9 East. The CIA encompasses 960 acres. The CIA area is much larger than the permit area due to the Wildcat Loadout Facility’s flat nature which prevents the selection of a specific watershed that would only include the permitted area.
III. SCOPE OF OPERATIONS

IPA subcontracts the operations of Wildcat Loadout, which is designed to load and crush about 5 million tons annually. The permit area encompasses about 83 disturbed acres which includes the operation facilities, as well as sediment control ponds, topsoil storage piles, a coal refuse pile and other support structures.

As part of the approved Mining and Reclamation Plan (MRP), all of the surface structures and coal will be removed at the time of reclamation.

IV. STUDY AREA

A. Geology

The Wildcat Loadout Facility is located on the Masuk Member of the Mancos Shale. The Masuk Member is a dark-gray marine shale with thin, discontinuous layers of gray limestone and sandstone that is from 600 to 800 feet thick in the Castle Valley area (Danielson, et al., 1981). The Masuk Member generally acts as an aquaclude; however, it may sporadically yield water to springs locally.

Rocks in the study area strike generally north and dip on to two degrees to the west. No faults have been identified in the study area.

B. Topography and Climate

The Wildcat Loadout is in the Gordon Creek area of the Wasatch Plateau, which is one of the major physiographic features in the region. The plateau rises from a base at approximately 6,000 feet in elevation to over 9,000 feet in elevation. Topography at the Wildcat Loadout ranges from approximately 6,000 feet to over 6,300 feet.

The permit area is located in a mid-latitude steppe climate with the lands below the Wasatch Plateaus approaching desert conditions. The nearest weather recording station is located approximately seven miles southeast and 1,500 feet lower in elevation of the Wildcat Loadout in Price, Utah. Temperatures at the facility are typically 3 to 5 degrees cooler than Price.

Average monthly temperatures in Price range from 36.9°F in January to 90°F in July. Average annual precipitation is 9.31 inches in price. Snowfall is generally light, averaging 21.1 inches per year.

C. Vegetation

Dominant vegetation types around the facility area pinyon/juniper and sagebrush/grassland. In general, vegetation varies from the desert saltbush community at lower elevations to Douglas Fir and aspen communities at higher elevations. The Wildcat Loadout Facility was constructed entirely within the sagebrush-grassland community.
V. HYDROLOGIC RESOURCES

A. Ground Water

There are no springs which occur within the CIA. One spring, located approximately 1,400 feet south of the CIA in Garley Canyon, discharges at a rate of three gallons per minute at the contact between Quarternary alluvium and the Upper Cretaceous Masuk member.

Two boreholes, drilled to a total depth of 60 feet, were utilized to investigate ground water resources within the permit area. The boreholes did not encounter water during the drilling program and subsequent monitoring did not identify infiltrated ground water.

The only potentially significant ground water resource within the CIA occurs beneath the Masuk member at a depth exceeding 600 feet.

B. Surface Water

The Wildcat Loadout is located in the lower Gordon Creek drainage basin. There are no perennial or intermittent streams within the CIA. The North Fork of Gordon Creek and the Price River, both which are perennial, occur within 1.5 and 3.5 miles of the CIA respectively. All streams in the CIA are ephemeral (Figure 2).

Disturbed area runoff is controlled by sedimentation facilities. Undisturbed area runoff is diverted away from the loadout. All sediment ponds are regulated by a UPDES permit, and are designed to prevent additional contributions of sediment to the hydrologic basin. In 2015, the permit boundary was expanded to the west of the loading facilities to ensure that any windblown coal fines will fall within the disturbed area boundary. This expanded area controls storm water runoff through a series of excelsior logs, placed and designed to prevent coal fines from leaving the permit area.

VI. POTENTIAL HYDROLOGIC IMPACTS

A. Ground Water

No shallow ground water resources were identified within the CIA. Although a ground water resource may occur at depth beneath the CIA, potential impacts to this resource from surface leaching associated with the Wildcat Loadout Facility are herein determined to be practically non-existent.

B. Surface Water

Leachate and acid- and toxic-forming material analysis has been performed on all materials stored on-site. Results of the analyses, contained within the approved MRP, indicate that no potential impacts will occur to the surface water in the CIA.
A surface water monitoring plan has been designed and approved for the facility. Two ephemeral drainages above the site and two below the site will be monitored quarterly for parameters outlined in the approved MRP.

The combination of the surface water monitoring plan, UPDES monitoring, and leachate analysis will enable determination of any potential impacts to the hydrologic balance.

VII. STATEMENT OF FINDINGS

The operational designs proposed and approved for the Wildcat Loadout Facility area herein determined to be consistent with preventing damage to the hydrologic balance outside the permit area.
REFERENCES

Intermountain Power Agency Incorporated, Mining and Reclamation Plan, C/007/0033 Wildcat Loadout Facility, Carbon County, Utah

Wildcat Loadout Facility Location Map

Figure 1
Location Map
Nov 2015

Coal Fields
Culmulative Impact Area (CIA)  
Wildcat Loadout

Figure 2
Location Map  
Nov 2015