

ENVIRONMENTAL ASSESSMENT

PROPONENT: Duncan Ranch Colony, Inc

SITE NAME: Duncan Ranch Site

LOCATION: Section 17, T8N, R14E

COUNTY: Wheatland

September 2009

TYPE AND PURPOSE OF ACTION: Proponent has applied for a 7-acre permit to mine sand and gravel. The site consists of a flat dryland farmland bench above the Musselshell River valley floor. There are no obvious on-site or surrounding-area characteristics of special concern. There are no nearby residences.

Proponent states that the maximum depth of mining would be 8 feet and 60-70,000 cubic yards of mine material would be excavated at the site. A screen and wash plant would be used at the site. The estimated date of final reclamation is November 2019.

The application contains all items required by the Act and Rules. Proponent commits to properly conducting opencut operations and would be legally bound by their permit to reclaim the site to postmining land use of dryland farmland.

A = significant unavoidable impacts. B = insignificant as a result of conditioned mitigation. C = insignificant as proposed.

	POTENTIAL IMPACTS AND MITIGATIVE MEASURES					
	A	B	C	LONG TERM	SHORT TERM	EXPLANATION
PHYSICAL ENVIRONMENT						
1. <u>TOPOGRAPHY</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mine material removal would alter the topography by lowering the surface and creating new slopes. All surfaces would be graded to 5:1 or flatter and blended into the surrounding topography and drainageways.
2. <u>GEOLOGY</u> : stability	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The Department reviewed potential impacts due to the removal of mine material and determined that the site can be reclaimed to a stable condition.
3. <u>SOILS</u> : quality, distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The average mine-level area soil thickness is 6 inches and the average mine-level area overburden thickness is 12 inches. Soil and overburden would be stripped from mine-level areas and evenly placed on areas prepared for resoiling. Soil stripped from facility-level areas would be evenly replaced on those areas.
4. <u>WATER</u> : quality, quantity; distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Surface water and ground water do not appear to be factors at this site. There are no water wells in or near the site that could be affected by this operation. Water for the contained wash plant is pumped from the Musselshell River. The colony has a water right.
5. <u>AIR</u> : quality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	There would be some degradation of air quality while operations are in progress. Proponent must comply with state air quality regulations.
6. <u>UNIQUE, ENDANGERED, FRAGILE, OR LIMITED ENVIRONMENTAL RESOURCES</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None identified.
BIOLOGICAL ENVIRONMENT						
1. <u>TERRESTRIAL, AVIAN, AND AQUATIC SPECIES AND HABITATS</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The Montana Natural Heritage Program reports six species of special concern: ferruginous hawk, mountain plover, long-billed curlew, McCown's longspur, chestnut-collared longspur, and gray wolf. None of these species would be affected by an opencut mining operation on the flat dryland-farmland bench. The opencut operation would disturb a relatively small area. Abundant similar

						habitat exists in the area.
2. <u>VEGETATION</u> : quantity, quality, species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The proposed disturbance area consists of dryland farmland. The Montana Natural Heritage Program reports no species of special concern. No noxious weeds were observed on or next to the proposed permit area. Proponent contacted the local weed district about the proposed operation and is in compliance with their requirements.
3. <u>AGRICULTURE</u> : grazing, crops, production	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	A small area of dryland farmland would be temporarily out of production. This would not substantially impact local agriculture. The site would be reclaimed to dryland farmland.
HUMAN ENVIRONMENT						
1. <u>SOCIAL</u> : structures, mores	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2. <u>CULTURAL</u> : uniqueness, diversity	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. <u>POPULATION</u> : quantity, diversity	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4. <u>HOUSING</u> : quantity, distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5. <u>HUMAN HEALTH & SAFETY</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No problems are anticipated.
6. <u>COMMUNITY & PERSONAL INCOME</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7. <u>EMPLOYMENT</u> : quantity, distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
8. <u>TAX BASE</u> : local, state tax revenue	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
9. <u>GOVERNMENT SERVICES</u> : demand	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
10. <u>INDUSTRIAL, COMMERCIAL, & AGRICULTURAL ACTIVITIES</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
11. <u>HISTORICAL AND ARCHAEOLOGICAL</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The State Historic Preservation Office states there have been no previously recorded historic or archaeological sites in the area, and that there is a low likelihood cultural properties will be impacted. No resources were identified during the Department of Environmental Quality's premine inspection.
12. <u>AESTHETICS</u> : noise, visual	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The site is on the south side of a rural highway.
13. <u>ENVIRONMENTAL PLANS AND GOALS</u> : local, regional	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Proponent contacted the local zoning authority about the proposed operation and is in compliance with local zoning regulations.
14. <u>DEMANDS ON ENVIRONMENTAL RESOURCES</u> : land, water, air, energy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
15. <u>TRANSPORTATION</u> : networks, traffic flows	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Proponent would use Highway 12 and county roads to transport mine material to project sites. This activity would not substantially affect local traffic.

ALTERNATIVES CONSIDERED: The Department would deny an incomplete application or one that does not comply with the Act and Rules. The proponent could then submit a modified application or submit an application for another site.

PUBLIC INVOLVEMENT: Agencies and individuals involved in the process included the Montana Natural Heritage Program, State Historic Preservation Office, local zoning authority, county weed control board, and landowner.

OTHER GROUPS OR AGENCIES CONTACTED OR WHICH MAY HAVE OVERLAPPING JURISDICTION:

DEQ's Air Resources Management Bureau regarding air quality, DEQ's Water Protection Bureau regarding water discharge, DNRC's Water Rights Bureau regarding water rights, and MSHA regarding mine safety.

REGULATORY IMPACT ON PRIVATE PROPERTY: The analysis done in response to the Private Property Assessment Act indicates no impact. The Department does not plan to deny the application or impose conditions that would restrict the use of private property so as to constitute a taking.

RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS: No further analysis

INDIVIDUALS OR GROUPS CONTRIBUTING TO THIS EA: None

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