

FINAL ENVIRONMENTAL ASSESSMENT

Valley Sand & Gravel, LLC Dahl Gravel Pit Holmes Gulch

An environmental assessment (EA) is required under the Montana Environmental Policy Act (MEPA). An EA functions to identify, disclose and analyze the impacts of an action, in this case operating a gravel pit over which the state must make a decision, so that an informed decision can be made. MEPA sets no environmental standards even though it requires analysis of both the natural and human environment. This document may disclose many impacts that have no legislatively required standards or over which there is no regulatory authority. The state legislature has provided no authority in MEPA to allow the Department of Environmental Quality (DEQ), or any other state agency, to require conditions or impose mitigations on a proposed permitting action that are not included in the permitting authority and operating standards in the governing state law, such as the Opencut Mining Act, the Clean Air Act of Montana, or any other applicable state environmental regulatory law. Beyond that, a company may agree to voluntarily modify its proposed activities or accept permit conditions.

The state law that regulates gravel-mining operations in Montana is the Opencut Mining Act. This law and its approved rules place operational guidance and limitations on a gravel-mining project during its life, and provides for the reclamation of permitted land area. This law requires that a surety bond, cash deposit or other financial instrument be submitted to the state to cover the complete costs of reclaiming the site to its approved, post-mining land use.

The permit decision cannot be based upon the popularity of the project, but upon whether or not the proponent has met the requirements of the Opencut Mining Act, pursuant rules, and other laws pertaining to its proposed actions.

PROPONENT: Valley Sand & Gravel, LLC

SITE NAME: Dahl Site

LOCATION: Section 1, T9N, R3W

COUNTY: Jefferson

TYPE AND PURPOSE OF ACTION: Proponent submitted an application to the Opencut Mining Program for a 5.5-acre permit to mine about 20,000 cubic yards of gravel approximately 2 miles south of East Helena, Montana in the area known as Holmes Gulch. Approximately 0.5 acres of the proposed permit area includes a 1,500' long access road. This road currently exists as a two track trail between the site and the subdivision roads under construction. The access road would be graded smooth and gravel spread on areas where needed. Mining would begin slightly above the valley elevation and progress at this grade into the adjacent hill slope. Initially, mined material would be screened, crushed, and mixed with near-by dredge tailings for use in construction of roads on an adjacent property: the drainage bottom of Holmes Gulch was dredge-mined approximately a century ago. Reclamation of the permit area would be complete by June 2009. All application materials required under the Opencut Mining Act and the rules adopted there under have been submitted. The proponent commits to properly conducting opencut operations and reclaiming past and present disturbances to a postmining land use of grazing. The proponent will be legally bound by its permit to reclaim the site as well as site conditions and available resources allow.

PUBLIC COMMENTS/QUESTIONS AND DEQ RESPONSES

Nine copies of the Draft EA were sent out to interested residents and other government or private groups on September 19, 2006. The Draft EA and a Public Notice were posted on the DEQ internet Web site on the same day. The comment period for this Draft EA closed on September 27, 2006. The following is a list of comments and DEQ's response to comments. Some comments were combined and paraphrased, as necessary, for efficiency and convenience.

Public Comment/Question: No statement is made concerning the roads and road work needed to access the site.

DEQ Response: A brief explanation of the access road was taken from the operations plan and added to the "TYPE AND PURPOSE OF ACTION" section of this Final EA. The DEQ Opencut Program has no jurisdiction over adjacent subdivision roads where much of the product from this site would be used.

Public Comment/Question: In part 2 – Geology – Past observations by residents report water flows in the area well above the proposed work site.

DEQ Response: We concur with this statement. There are fluvial processes at work within Holmes Gulch: erosion above the permit area and deposition within the permit area. Deposition within the permit area is the result of pre-mine tailings that block Holmes Gulch down gradient of the permit area.

Public Comment/Question: The statement “Within the permit area, there is no erosion in the drainage bottom and little vegetation.” conflicts with the trees, willows, forbs and grasses observed in the gulch.

DEQ Response: As clarification, this statement was in reference to fluvial geomorphic processes and points of aggradations within the drainage bottom; however, Section 2 has been modified to account for this public comment. Yes, there is good vegetation throughout most of the drainage bottom along with bare tailings, piles of rock with no vegetation, reclaimed tailings, and areas of obvious aggradations with emergent vegetation.

Public Comment/Question: The statement in the Soils section saying, “The tailings are currently supporting extensive native vegetation.” may conflict with the statement about little vegetation.

DEQ Response: This statement is in reference to the tailings piles and not the very bottom of the drainage where erosion above the permit area and aggradations within the permit area are affecting a small cross-section of the vegetation.

Public Comment/Question: The Board questions the 5.5 acres under consideration for the permit area. The impact of this operation will impact far more than 5.5 acres.

DEQ Response: The proponent has only applied for 5.5 acres of disturbance related to the Opencut Mining Act. Impacts as a result to the operation as proposed were analyzed and found to be insignificant.

Public Comment/Question: Explain the effect of crushing operations on near-by wells and building foundations.

DEQ Response: DEQ has permitted hundreds of crushing operations in close proximity to wells and building structures with foundations and we have no knowledge of damage resulting from crusher vibrations. Ground and air vibration from a jaw rock crusher would be above the frequency expected to cause damage to a building foundation or properly cased water well. In addition, the crushers used on this site would not be expected to produce enough seismic energy to cause any noticeable vibration at distances over approximately 500’ away.

Public Comment/Question: Will rock crushing 24-hours a day affect my quality of life?

DEQ Response: The permit would limit the hours of operations to 6:00 am to 7:00 pm Monday through Friday and 7:00 am to 3:00 pm on Saturdays. Winter month operations would be limited to 8:00 am to 5:00 pm.

Public Comment/Question: Will water consumption at this site affect the water table?

DEQ Response: Water would be used for dust control on the access road and crusher. The access road encompasses 0.5 acres of surface area. If 0.5 inches of water were applied in one day, dust control for this road would consume 0.02 acre-feet of water per day. Conservatively, the operator could remove the proposed 20,000 cubic yards of product from this site in 60 days. This equates to 1.2 acre-feet of water usage for dust control on the access road. If 10% water is added to the product during crushing, this project would consume another 1.2 acre-feet of water for dust control in the crusher. Total water consumed for this project would be insignificant when compared to the groundwater aquifer.

Public Comment/Question: “His mining site is the main drain to hundred of thousands of acres. It fills with the water run off. The dam he spoke of is broken. It was and is not a [dam] but a road that allowed men to rebuild the water supply to the ranch east of the site. It was washed out in a minor flood. It will supply limited to no help when that ravine again fills with thirty [feet] of water.”

DEQ Response: Holmes Gulch drains a large area, but only around 2,000 acres. In addition, runoff above the proposed permit area is affected by upslope stock ponds and culverts under I-15. There is a possibility of flooding but the plan would require all stockpiles and the excavation to be above the drainage bottom [Section II-E(1)(d) and G(1)(a) of the Plan of

Operation]. We concur with the comment that there is no dam below the permit area but investigation of the site confirms two areas where the tailings do block the drainage. Comments in the EA about the tailings blocking Holmes Gulch were made in regard to aggradations within the permit area and not sediment control. The operator would not operate during runoff events. The impact on surface water quality due to equipment crossing an already disturbed ephemeral drainage is limited. The permittee has been encouraged to secure a Storm Water Permit for the extensive disturbance associated with the removal of tailings within Holmes Gulch.

Public Comment/Question: I have found arrow heads in the area. The excavation could harm new sites.

DEQ Response: The plan requires that the proponent provide appropriate protection for identified cultural resources that could be affected by opencut operations and promptly notify the State Historic Preservation Office (SHPO) and DEQ should additional resources be found. This is standard operating procedure for most if not all industries in the state of Montana that disturb the surface of the ground. In addition, a qualified DEQ representative established an appropriate transect interval and inspected the site. There was no evidence of any cultural properties.

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"/>	Removal of gravel would alter the topography. No closed end depression would be left in the landscape but rather a three sided excavation that would resemble a valley in the side of a hill. All surfaces would be graded to 3:1 (h:v) or flatter.
2. <u>GEOLOGY</u> : stability	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>The topography in the area consists of rolling terrain dissected by narrow valleys. Holmes Gulch is one of these valleys. It flows west to east. Within the proposed permit area, the north side of the valley crests into rolling terrain approximately 50' above the valley bottom. At this point the valley is approximately 500' wide. Holmes Gulch crosses a railroad track approximately 800' down gradient of the proposed permit area and connects with Prickley Pear Creek. The drainage bottom was dredged many years ago from the tracks up gradient for approximately 1,400'. Dredge tailings have been dumped on both sides of the drainage within the narrow valley.</p> <p>The proposed excavation would be above any possible flows within Holmes Gulch and into the slope on the north side of the gulch. Within the proposed permit area, there is no active erosion in the drainage bottom. This section of the drainage is an area of aggradation due to tailings that block the drainage just below the permit boundary. Potential impacts due to the removal of mine material have been reviewed. DEQ has determined that proposed disturbances could be reclaimed to a condition that is at least as stable as pre-mine conditions.</p>
3. <u>SOILS</u> : quality, distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Approximately 3" to 4" of soil would be salvaged from the top of the bench and where it could be safely accessed on the slope above to Holmes Gulch. A large area inside the proposed permit was disturbed by historic dredge mining

					<p>and has no soils. There would not be enough native soil salvaged on-site to reclaim the areas proposed for use at this site. Any deficit in soil for reclamation of the site would be offset with near-by dredge tailings suitable for plant growth. Approximately 18" of material is planned for this purpose. The tailings are currently supporting extensive native vegetation.</p> <p>A remedial investigation of the chemical and physical properties of surface soils (0 to 1 inch) around the ASARCO plant in East Helena was summarized in the following May 1987 report by the Environmental Protection Agency (EPA), Hazardous Site Control Division (EPA Work Assignment No. 68-8L30.0): <i>Remedial Investigation of Soils, Vegetation and Livestock for East Helena Site (ASARCO)</i>. The soil sample grid for this investigation included Holmes Gulch and this proposed permit area. There were 13 samples taken in this area. The minimum, maximum, and average lead concentrations are, respectively: 111, 336, and 193 mg/kg dry weight. These concentrations are below the 500 mg/kg EPA threshold for remedial action.</p>	
4. <u>WATER</u> : quality, quantity; distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>There are no wells within 1000' of the site. The site would not intersect the groundwater table. Use of water for dust control would have an insignificant impact on ground water levels.</p> <p>Removal of old dredge tailings within and outside of the proposed permit area would have a positive effect on surface water flows within Holmes Gulch. Two positive effects include removing obstructions to the floodplain and a source of sediment. Equipment crossing Holmes Gulch within the proposed permit would have an insignificant impact on surface water quality: the point of crossing would be in an area of stream aggradation and there is a pre-mine berm down gradient that would catch any sediment.</p> <p>No significant impacts to the surface water or ground water would be expected as a result of mining, soil salvage or product stockpiles because of limited contact with water. All stockpiles are proposed to be located outside the floodplain.</p>
5. <u>AIR</u> : quality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>There would be some degradation of air quality while operations are in progress. The proponent must comply with state air quality regulations and has committed to special handling of surface soils that could have elevated concentrations of lead. Special handling includes segregation and adding water as needed to control dust.</p>
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 reported no species of concern in the 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"/>	<p>The Montana Natural Heritage Program reports the wedge-leaved saltbush as a species of special concern for the area. No saltbush was identified in or adjacent to the permit area.</p> <p>The approved weed control plan includes a signed agreement between Jefferson County and the proponent. The agreement would commit the operator to monthly reporting of the quantity of material removed and the location of delivery of the material. Both Jefferson and Lewis and Clark Counties would receive monthly reports.</p>
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 grassland would be taken out of production without significant impact to local agriculture.
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"/>	
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"/>	A walkover of the area did not reveal any artifacts or signs of occupation. If during operations resources were to be discovered, activities would be halted and moved to another area until SHPO was contacted and the importance of the site was determined.
12. <u>AESTHETICS</u> : noise, visual	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The permit area cannot be seen from any public points of access. Removal of dredge tailings would reduce the visual impact of pre-law mining disturbance.
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"/>	The proposed operation complies with county 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"/>	A portion of the gravel would be used in a subdivision adjacent to the mine site and would

						not be transported on or across any public roads. Conversely, there is a subdivision under construction on the other side of Highway 282 and gravel would be transported across the highway. Traffic crossing the highway would have to comply with all traffic laws. The potential impacts of crossing Highway 282 from the proposed site should be less than those impacts that would result from the importation of material from more distant sites.
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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 and OSHA 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

Approved By: _____ Date: _____

(Signature)

Prepared by: Peter Mahrt