

## ENVIRONMENTAL ASSESSMENT

### On an Application for an OPENCUT MINING PERMIT

The Montana Department of Environmental Quality (DEQ) prepared this Environmental Assessment (EA) in accordance with requirements of the Montana Environmental Policy Act (MEPA). An EA functions to identify, disclose, and analyze the impacts of a proposed action. This document may disclose impacts that have no legislatively required mitigation measures, or over which there is no regulatory authority.

The state law that regulates gravel mining operations in Montana is the Opencut Mining Act. This law and the rules adopted thereunder place operational guidance and limitations on a project during its lifetime, and provide for the reclamation of land affected by opencut mining operations.

Local governments and other state agencies may have authority over different resources and activities under their regulations. Approval or denial of this Opencut Application will be based on a determination of whether or not the proposed operation complies with the Opencut Mining Act and the rules adopted thereunder. The DEQ approval of this application would not relieve the operator from the obligation to comply with any other applicable federal, state, or county statutes, regulations, or ordinances. The operator is responsible for obtaining any other permits, licenses, approvals, etc. that are required for any part of the proposed operation.

**APPLICANT:** Hunter Light – ND, LLC

**COUNTY:** Richland

**SITE NAME:** Lucy's Sandbox

**DATE:** August 2013

**LOCATION:** Section 12, T24 N, R59 E

**PROPOSAL:** The applicant proposes to permit a new, long-term gravel pit to mine, screen, crush, wash, stockpile and transport 2,000,000 cubic yards of gravel from a 54.1-acre site located approximately 1.75 miles northwest of Fairview, MT. The site is located approximately 0.25 miles southwest of the Fairview Airport. There is currently an old reclaimed pit in the southeast corner of the site. This reclaimed pit is approximately 30 feet deep; with the pit floor sitting approximately 2 feet above ground water. An approximate 2.4 acre pond would remain at final reclamation in this location. There is a saltwater pipeline which runs east to west from the Sondheim 12-7HD oil pad to the Deming 41-12H oil pad located just to the north of the proposed permit boundary. A 50-foot buffer from where the saltwater pipeline line is marked to the edge of the open-cut permit is incorporated. The buffer helps to keep the overhead utility lines located near the pipeline from becoming a potential site hazard. A 50-foot buffer from the south part of the oil pad was also kept as a precaution to ensure no interference with the oil operation occurs due to the mining of this site. DNRC Board of Oil and Gas found no evidence of anything that would interfere with the mining operation, or any other reason for there to be a concern with the current mining plan of operation. All of the features discussed are shown on the attached Figure 2-Area Map.

The onsite pond design would have a sinuous shape, varying slopes and depths, wetland vegetation, and a berm on the upwind side of the pond. However, the pond will not include an island. In discussions with the Sidney-Richland Airport Authority and from the notes regarding wildlife in the DEQ deficiency letter, the island was removed from the original design to lessen the attraction of wildlife, specifically avian species to the pond. The removal of the island and the small size of the pond do not completely eliminate the potential for the pond acting as a wildlife attraction. The pond would also act as a retention basin to allow settlement of solids during storm events from being discharged from the area, as a water source for livestock and potential recreational use.

A reclamation bond would be held by DEQ to ensure that final reclamation of the site to Rangeland/pasture and year-round pond would be completed by June 2023.

This application contains all items required by the Opencut Mining Act and its implementing rules. Proponent commits to properly conducting opencut operations and would be legally bound by the permit.

| <b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>                                     |  |
|--|--|
| <b>RESOURCE</b>  | <b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>   |
| <p><b>1. TOPOGRAPHY, GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:</b></p> | <p>The site consists of a large flat area with an ephemeral drainage running northwest/southeast across the site. There is currently an old reclaimed pit in the southeast corner that was owned and operated by Richland County (according to cadastral). The entire site is made up of the Qgt rock unit. This unit was deposited during the Pleistocene epoch of the Quaternary period. It consists of glacial till from the Laurentide ice sheet (clay, silt, sand and gravel) which is moderately sorted, and may contain cobbles and boulders.</p> <p>The onsite soils consist of Williams loam, 0 to 4% slopes and Zahill loam, 15-65% slopes. The operator will replace 15 inches of soil and 3 inches of overburden.</p> <p>The site receives approximately 14 inches of precipitation per year.</p> <p><i>Impacts:</i> An irreversible and irretrievable removal of gravel from the site would occur. A small impact to the quantity and quality of soils from salvaging, stockpiling, and resoiling activities also would occur, but this would not impair the capacity of the soils to support full reclamation. There are no unusual topographic, geologic, soil, or special reclamation considerations that would prevent reclamation success.</p> |
| <p><b>2. WATER QUALITY, QUANTITY AND DISTRIBUTION</b></p>                      | <p>The on-site drainage eventually flows into Main Canal, approximately 5,500 feet to the south. Where the onsite ephemeral drainage exits the site, there is a two foot culvert which directs flow under the road and into the larger drainage to the southeast. The reclaimed pit is approximately 30 foot deep, with the pit floor sitting approximately 2 feet above ground water. The resulting mining of this area would leave an approximate 2.4 acre year round pond at final reclamation. Since there would likely be some surface water and possibility of sediment being discharged from the site, an Industrial Permit for Stormwater Discharge was obtained through the DEQ Water Protection Bureau. The permit number is MTR000530.</p> <p>Water would be used onsite for crushing, dust control, and a wash plant. It would be obtained from an onsite pit in conformance with DNRC rules and Water Rights regulations and permits.</p> <p><i>Impacts:</i> The proposed activities would have a minimal effect on the quantity and quality of the surface and groundwater resources.</p> <p><i>Cumulative:</i> No cumulative impacts are anticipated.</p>   |
| <p><b>3. AIR QUALITY</b></p>   | <p>Air quality standards are based upon the Clean Air Act of Montana and pursuant rules and are administered by the DEQ Air Resources Management Bureau (ARMB). Its program is approved by the Environmental Protection Agency (EPA). These rules and standards are designed to be protective of human health and the environment.</p> <p>Air quality permits would be required on the processing equipment before installment. Machinery, such as generators, crushers and asphalt plants, are individually permitted for allowable emissions. Best Available Control</p>   |

| IMPACTS ON THE PHYSICAL ENVIRONMENT                                       |  |
|---|--|
| RESOURCE  | POTENTIAL IMPACTS AND MITIGATION MEASURES  |
|   | <p>Technology (BACT) is the usual standard applied.</p> <p>Fugitive dust is that which blows off the pit floor, stockpiles, gravel roads, farm fields, etc. It is considered to be a nuisance but not harmful to health.</p> <p><i>Impacts:</i> Air quality standards as set by the federal government and enforced by the ARMB would allow minimal detrimental air impacts.</p>   |
| <b>4. VEGETATION COVER, QUANTITY AND QUALITY</b>                          | <p>There are no known rare or sensitive plants or cover types present in the site area. Onsite vegetation consists of smooth brome, crested wheatgrass, winterfat, yellow sweetclover, snake grass, alfalfa, common sunflower, and Canada thistle; and provides approximately 80-90% cover. The vegetation would be removed as soil is stripped and the site would be replanted with plant species compatible with the proposed reclaimed use.</p> <p><i>Impacts:</i> No long term detrimental impacts to the vegetation would occur.</p>  |
| <b>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:</b>               | <p>Although the area is used primarily for pasture, it also supports populations of deer, antelope, raptors, song birds, upland birds, small mammals, insects and various other animal species. Population numbers for these species are not known.</p> <p><i>Impacts:</i> The proposed mine is expected to temporarily displace some individual species and it is likely that the site would be re-inhabited following reclamation to similar habitat.</p>  |
| <b>6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:</b> | <p>The Montana Natural Heritage Program (MNHP) lists the following one species of concern in the vicinity of the site:</p> <p><b>Whooping Crane</b> (<i>Grus americana</i>) is the tallest bird of North America, reaching nearly 1.5 meters in height. The vocalization of the Whooping Crane is the feature that defines its common name. The loud resonating calls may be heard up to two miles away. The sexes appear similar; adult plumage is snowy-white overall, with males generally larger than females. The Whooping Crane has been observed in grain and stubble fields as well as wet meadows, wet prairie habitat, and freshwater marshes that are usually shallow and broad with safe roosting sites and nearby foraging opportunities. Migrants feed primarily in a variety of croplands. The Whooping Crane breeds monogamously with the same mate throughout life.</p> <p><i>Impacts:</i> The above listed species has not been found on this site. Even if suitable habitat did exist on this site, the disturbance area would be small and large areas of similar or identical habitat surrounds the site. The possible impact to this species would be minimal.</p> |
| <b>7. HISTORICAL AND ARCHAEOLOGICAL SITES</b>                             | <p>The Montana State Historic Preservation Office (SHPO) was notified of the application. It reported that no sites have been discovered previously within the designated search locale. A pedestrian survey of the area by DEQ personnel did not reveal any artifacts or signs of occupation. No signs were evident at depth in the previously disturbed area. SHPO does not feel that a cultural resource inventory is warranted at this site at this time.</p> <p><i>Impacts:</i> If during operations resources were to be discovered, activities would be temporarily moved to another area or halted until SHPO was contacted and the importance of the resources was determined.</p>  |

| <b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>                                 |  |
|--|--|
| <b>RESOURCE</b>  | <b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>   |
| <b>8. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY</b> | <p>There are no unusual demands on land, water, air or energy anticipated as a result of this project.</p> <p><i>Impacts:</i> Negligible impacts to land, water, air, or energy would occur.</p> |

| <b>IMPACTS ON THE HUMAN POPULATION</b>   |   |
|--|---|
| <b>RESOURCE</b>  | <b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>  |
| <b>9. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS</b>                          | <p>Richland County zoning clearance has been obtained.</p> <p>Site is not zoned.</p>  |
| <b>10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING</b>                    | <p>As seen on the aerial photo of the surrounding area, there are no nearby residences.</p> <p><i>Impact:</i> This commercial pit is being sited in this area because of the location of the resource, and to service the growing population in this area of the county.</p>  |
| <b>11. AESTHETICS</b>  | <p>The site is located in a common pasture/rangeland area. There would be a temporary alteration of aesthetics while mining is under way. However, reclamation would return the area to a visually acceptable landscape. This project is considered to be long-term, i.e., planned to take 10 years to complete.</p>  |
| <b>12. QUANTITY/ DISTRIBUTION OF EMPLOYMENT</b>                                  | <p>Existing employees would mainly be utilized for this operation. There is low potential that this project would create a significant number of new jobs.</p> <p><i>Impacts:</i> New employment opportunities would be limited.</p>  |
| <b>13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION</b>        | <p>The acreage listed in the proposal would be taken out of pastureland use. Upon completion of mining, the land would be reclaimed to rangeland/pasture and a year round pond.</p> <p><i>Impacts:</i> Pastureland production would be reduced as soil stripping and operations progress across the site. When the entire site is opened up for mining and mine-related activities, all pastureland activities would cease, but would be restored as the site is reclaimed.</p> |
| <b>14. LOCAL, STATE TAX BASE AND TAX REVENUES, PERSONAL AND COMMUNITY INCOME</b> | <p>Local, state and federal governments would be responsible for appraising the property, setting tax rates, collecting taxes, etc., from the companies, employees, or landowners benefitting from this operation. Following reclamation, it is assumed the tax base would revert to pre-mine levels.</p>   |
| <b>15. DEMAND FOR GOVERNMENT SERVICES</b>  | <p>Limited oversight by DEQ Opencut Program personnel would be conducted in concert with other area activity when in the vicinity.</p>  |
| <b>16. HUMAN HEALTH AND SAFETY</b>   | <p>Any industrial activity will increase the opportunities for accidental injury. There are agencies that require specific safety measures are in place. If followed there is no reason to believe that significant safety issues would be present.</p>   |
| <b>17. ACCESS TO AND QUALITY OF RECREATIONAL AND</b>                             | <p>This activity would not inhibit the use of the identified resources.</p>   |



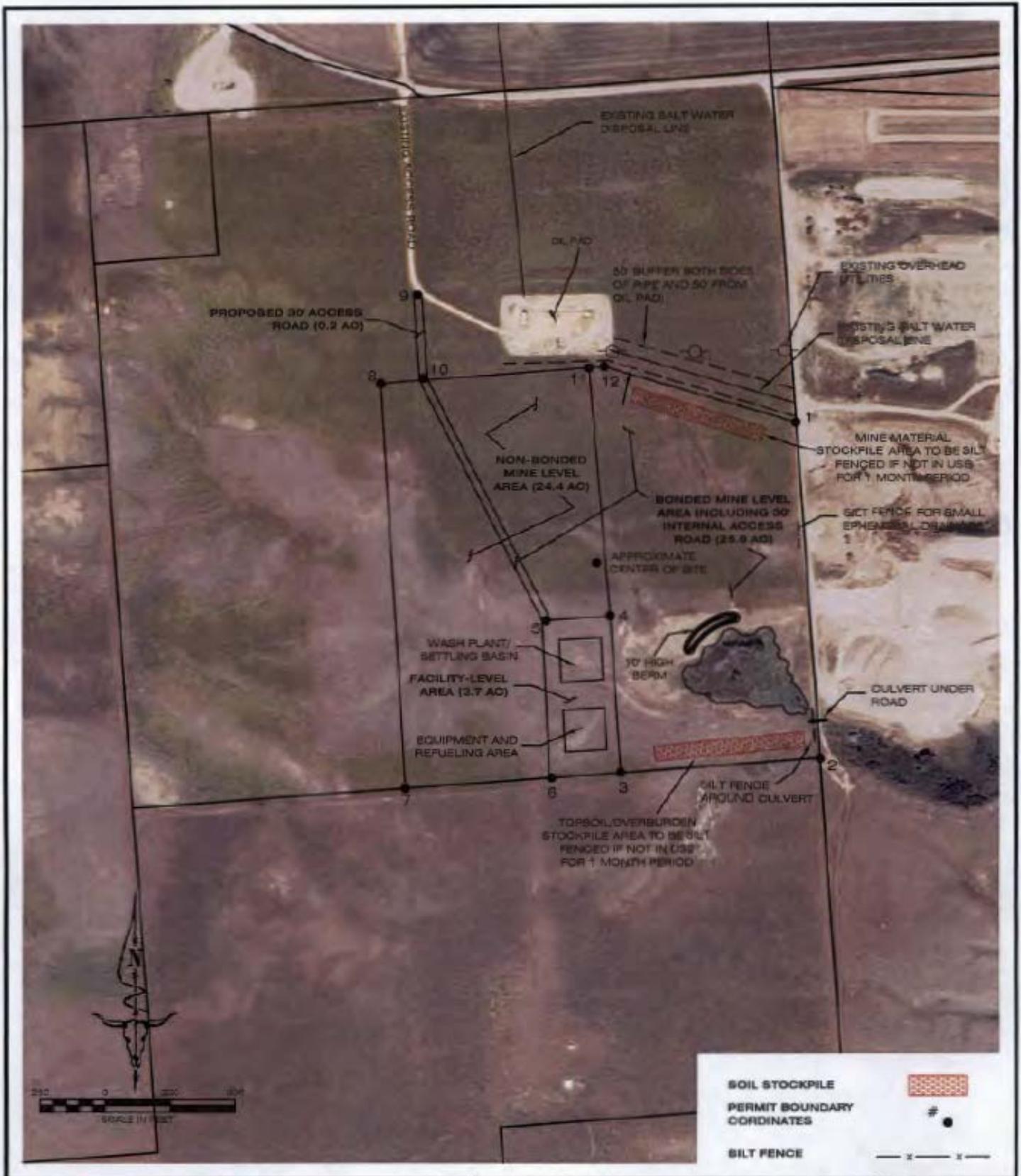
## PRIVATE PROPERTY ASSESSMENT ACT (PPAA) CHECKLIST

DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS UNDER THE PPAA?

| YES | NO |   |
|-----|----|---|
| X   |    | 1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?   |
|     | X  | 2. Does the action result in either a permanent or indefinite physical occupation of private property?  |
|     | X  | 3. Does the action deprive the owner of all economically viable uses of the property?   |
|     | X  | 4. Does the action deny a fundamental attribute of ownership?   |
|     | X  | 5. Does the action require a property owner to dedicate a portion of property or to grant an easement? (If answer is NO, skip questions 5a and 5b and continue with question 6.)                          |
|     |    | 5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?   |
|     |    | 5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?   |
|     | X  | 6. Does the action have a severe impact on the value of the property?   |
|     | X  | 7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? (If the answer is NO, skip questions 7a-7c) |
|     |    | 7a. Is the impact of government action direct, peculiar, and significant?   |
|     |    | 7b. Has the government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?  |
|     |    | 7c. Has the government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?        |

Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b.

If taking or damaging implications exist, the agency must comply with § 5 of the Private Property Assessment Act, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.



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PLUT DATE: 1/16/2013 1:47 PM

**FIGURE 1 - SITE MAP**  
**HUNTER LIGHT-ND, LLC**  
**LUCY'S SANDBOX**  
**SECTION 12, T24N, R59E**  
**RICHLAND COUNTY, MONTANA**

PROJECT#: 12-2965

TAB: SITE MAP

DRAFTER: SA

DATE: 08/17/2012

SHEET 1 OF 4

CWD LOCATION: T:\ACTIVE PROJECTS\PROJECTIONS - HUNTER LIGHT-ND LUCY'S SANDBOX\FIGURE 1 - SITE MAP

RECEIVED BY OPENCUT 7/22/2013