March 27, 2019

RE: Notice of Availability of Draft Environmental Assessment for an Application for an Operating Permit for Two Quarries from TP Construction, Inc., in Hill County

Dear Reader:

T.P. Construction, Inc., has filed an application with the Department of Environmental Quality for a multi-quarry operating permit under the Metal Mine Reclamation Act. The operating permit would authorize the quarrying of igneous rock (shonkinite and volcanic rock) at two locations. The Beaver Creek quarry site is located about six miles south of Havre, MT in Section 31, Township 32 North, Range 16 East with a plant site located in Section 1, Township 31 North, Range 15 East in Hill County. The Waid Quarry and plant site is located about 8 miles southeast of Havre, MT in Sections 2 and 3, Township 31 North, Range 16 East in Hill County.

T.P. Construction currently quarries rock at the two sites and needs an operating permit due to proposed expansion of the sites. T.P. Construction proposes to disturb approximately 20 acres at the Beaver Creek Quarry and plant site and approximately 17 acres at the Waid Quarry and plant site. The crushed rock, about 50,000 cubic yards in total per year, would be used for rip rap, railroad ballast, and other purposes. The sites are on private land and would employ up to 18 people.

Copies of the draft environmental assessment (EA) can be reviewed at DEQ offices at 1520 E. 6th Ave., in Helena, MT. The comment period on the draft EA will end on April 30, 2019. The draft EA will also be posted on the DEQ web page: www.deq.mt.gov. For information on the project contact:

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Sincerely,

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Montana Department of Environmental Quality
Air, Energy, & Mining Division
Hard Rock Mining Bureau

ENVIRONMENTAL ASSESSMENT

COMPANY NAME: T. P. Construction Inc.
OPERATING PERMIT: Pending Operating Permit #00194, Current Small Miner Exclusion Statement (SMES) #12-004 and #12-004B
LOCATION: 3301 Hwy 2 NW, Havre, MT. 59501
T31N, R16E, Sections 2 and 3 (Waid Quarry and loadout/processing site), T32N, R16E, Section 31 (Beaver Creek Quarry) and T31N, R15E, Section 1 (Beaver Creek loadout/processing site)
COUNTY: Hill
PROPERTY OWNERSHIP: FEDERAL ___ STATE _ PRIVATE _ X_
TYPE AND PURPOSE OF PROPOSED ACTION:
Background:
T. P. Construction Inc. (the applicant) has applied for an operating permit to include current SMES sites #12-004 & #12-004B acreages into proposed Operating Permit #00194.

Analysis Area: The two SMES sites are located in Hill County: Beaver Creek quarry is located in T32N, R16E, Section 31 and the associated loadout/processing site is located in T31N, R15E, Section 1. The Waid quarry and loadout/processing sites are located in T31N, R16E, Sections 2 and 3. The Beaver Creek site is located approximately six miles south of Havre on Hwy 234. From there, turn west onto Butte Road and go approximately one mile to the stockpile area. Associated with the Beaver Creek quarry is the loadout/processing site located about 0.75 miles to the southwest. The Waid quarry site is located approximately 6.4 miles south of Havre on Bullhook Road. Associated with the Waid quarry is a loadout/processing site located about 0.75 miles to the west.

T.P. Construction Inc. is applying for an operating permit to cover the mining operations conducted at these sites because the disturbance area at each site has grown beyond 5 acres—the size limitation for operating under a SMES. If issued, the operating permit would cover the Beaver Creek Quarry (and the corresponding load out facility) and the Waid Quarry. The option of applying for an operating permit was a corrective action identified in January 30, 2018, Department of Environmental Quality (DEQ) violation letters (2). The violation letters were issued by DEQ to T.P. Construction Inc. (one for each SMES site) for having disturbances at each site that exceeded the 5-acre SMES limitation.

Beaver Creek Quarry:
The Beaver Creek quarry is a rocky volcanic butte with little to no vegetation. The top 40 feet of the volcanic butte has been removed by mining. The proposed total permit boundary would be about 20 acres, which is also the size of the proposed permitted disturbance boundary. The surrounding area is primarily used for dryland grazing. The existing access road would be maintained and provides access to a home, out-buildings and corrals, as well as pasture areas to the east. The road has been in use for over 30 years and is owned by Shamrock Ranch Inc. T. P. Construction Inc. has obtained permission to use the road.
There are no surface disturbances adjacent to the site and no other mining is taking place in the area. Aside from the residence adjacent to the loadout/processing site (the resident is the crusher operator), the next closest resident is approximately 650 feet to the southwest. There are no high-use areas or homes within 3,000 feet of the proposed quarry site. A reservoir is located about 0.6 miles to the south of the quarry and a small spring is located about 0.4 miles to the southeast, alongside the haul route road. Hill County Electric has a 3-phase power line running east and west on the north side of the processing area. There is a 25 KVA transformer installed in the processing area to run the crusher and screening plant. No other utilities would be affected by the operation. All roads were pre-existing but have been modified to become Mines Safety and Health Administration (MSHA) compliant.

This area was previously used for dryland grazing and is not within designated sage grouse habitat.
Figure 1: Beaver Creek Quarry and Loadout/Processing Site (red oval) referenced to the town of Havre
Scope of Activity:
The site is currently licensed under SMES #12-004, however, due to the need for expansion, the SMES permit is proposed to be converted into pending Operating Permit # 00194.

Activities at the sites would be a continuance of current mining practices. Blasting would continue to take place. The rock would continue to be separated at the quarry using an excavator and trucked to the loadout/processing area. There the materials would continue to be placed so that a loader can feed the material into a crusher. The crusher would continue to produce various sized material for aggregate use, railroad ballast, and riprap, as well as crusher fines.

Duration of Activity:
Aside from the crusher being operated year-round, quarrying activities would be conducted on an
as needed basis. Life of mine is projected to be fifteen years.

**Personnel and Equipment:**
A contracted blaster would be used for the shot blast. The rock would then be brought to the loadout/processing area using an excavator and truck where it is processed into saleable sizes.

**Waid Quarry:**
The Waid Quarry is a shonkinite dike, originally mined in 1955 to provide rip-rap for the Army Corp. of Engineers for the Bullhook Diversion Dam project on Bullhook Creek. The proposed permitted area is about 31.5 acres, with about 16.2 acres permitted for disturbance (based on DEQ mapping). Bullhook Creek, located over 400 feet away from any current disturbances, flows seasonally, but is dry for most of the summer months. There is one small reservoir located about 680 feet to the north and about 540 feet to the south of the stockpile area. There is a spring which was developed at the base of the hill and is located west of, and about 200 feet below the top of the hill (see Figure 4). All roads were pre-existing but have been modified to become MSHA compliant.

The closest residence to the quarry is located approximately 4,200 feet from the quarry. The closest residence to the loadout/processing site is located about one mile away. There are no surface disturbances adjacent to the site and no other mining is taking place in the area.

This area was previously used for dryland grazing and is not within designated sage grouse habitat.
Figure 3: Waid Quarry referenced to the town of Havre. Note: The length of the project area is due to the long access road between the stockpile area at Bullhook Road and the quarry location.
Reservoir 1: The reservoir is located 680 feet north of the stockpile area and is adjacent to and west of the county road. The stockpile area is located at an elevation of about 2,973 feet at the top of the hill. The reservoir is located at an elevation of about 2,903 feet, a 70-foot elevational difference from the stockpile area. Some drainage from the stockpile area would flow north and towards the reservoir. Other drainage from the hill containing the stockpile area would flow south.

Reservoir 2: The reservoir is located about 540 feet to the southeast of the stockpile area and is adjacent to and east of the county road. A drainage crosses under the road and flows to the southwest. Reservoir 2 has an elevation of about 2,935 feet, 38-feet lower than the stockpile area. Some drainage from the hill containing the stockpile area would flow south towards the reservoir. Other drainage from the hill containing the stockpile area would flow north.

Scope of Activity:
Activities at the site would be a continuance of current mining practices. The site is drilled and blasted. A grizzly screen is used for rip-rap separation. No crushing takes place at the quarry site. The remaining material is separated into various sizes at the loadout/processing site through the use of screens.

Overburden has been stockpiled on the east side of the quarry where it can be used for reclamation. While no pit is anticipated, if there were to be one at closure, it would be backfilled with spoils, reclaimed, and be contoured to be free draining.

Duration of Activity:
Life of mine is projected to be 15 years, but market demands would determine ultimate life of the operation.
Personnel and Equipment:
A contracted blaster would be used for the shot blast. The rock would then be taken to the staging area where it would be processed into saleable sizes.

RECLAMATION PLAN:
Beaver Creek Quarry:
No highwall would be left at this location. All roads across the lower portions of the grasslands would remain. The backfilled areas would be graded to be free draining postmining and runoff would be directed to drainages. The stockpile area would be deep ripped, contoured, and salvaged soil would be placed over the top of those areas. The MSHA berms alongside the roads would be rolled back and seeded to create two-track roads. These roads would give ranch access between homes and rangeland, where is the roads are used for grazing, calving, and feeding stock. Roads would not be deep ripped, as the existing roads have a solid base. All seeding would take place with approved grass varieties.

Waid Quarry:
Should a highwall exist at the end of mining, it would be reduced by placing material against the highwall to reduce the slope to 3:1. The backfilled material would be graded to be free draining postmining and runoff would be directed to drainages. The stockpile area would be deep ripped, contoured, and soil would be placed to a depth of six to eight inches. MSHA berms alongside the roads would be rolled back and seeded to create two-track roads. These roads would give ranch access between homes and rangeland. All seeding would take place with approved grass varieties.

SUMMARY OF POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS:
The following has been prepared by DEQ.

1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE
Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?

Beaver Creek Quarry:
The area on top of the hill was barren of topsoil, previously existing as a rocky knob with very little vegetation. That area has since been removed by mining. Soils on the east side of the hill have been salvaged and was used to form an MSHA berm on that side of the quarry. The existing roads have had soil bladed to the side to meet MSHA regulations. The stockpile area had soil removed, stockpiled, and seeded, and now has vegetation growing. There were no instances within the quarry, roads, or loadout/processing areas, where soil depths exceeded six inches in depth.
Figure 5: Soils map for Beaver Creek quarry

899F—Zahill-Rock outcrop-Whitlash complex, 15 to 60 percent slopes.
Typical Profile:
A horizon: 0-3 inches clay loam
B horizon: 3-60 inches clay loam

671C—Bearpaw-Vida clay loams, 2 to 8 percent slopes
Typical Profile
A horizon: 0-6 inches clay loam
B horizon: 6-65 inches clay loam
C horizon: 65-79 inches clay loam

Direct Impacts:
For both the Beaver Creek Quarry and the loadout/processing site, soil horizons would be disrupted. The impacts would be minor, as salvaged overburden and/or soil would be replaced after mining and then contoured to match the surrounding topography as much as possible. The
area would then be seeded.

Secondary Impacts:
For both the Beaver Creek Quarry and loadout/processing site, secondary impacts may occur from erosion. However, those impacts would be minimal given the limited precipitation in the area and the rocky conditions of the site.

Waid Quarry:
The Waid Quarry was previously barren of soil on the existing floor, hill, and highwall. Established roads would remain for landowner access, although the MSHA berms would be bladed back and seeded to create two-track roads. The stockpile area was stripped of soil and placed alongside the roadway. The soil was seeded and is growing grasses per landowner’s seed selection.

Figure 6: Soils map for Waid quarry

725F—Zahill-Rock outcrop complex, 25 to 60 percent slopes (Quarry and access road)
Typical Profile:
A horizon: 0-3 inches, clay loam
B horizon: 3-60 inches clay loam

671C—Bearpaw-Vida clay loams, 2 to 8 percent slopes (Stockpile/storage/loadout)
A horizon: 0-6 inches clay loam
B horizon: 6-65 inches clay loam
C horizon: 65-79 inches clay loam

There are no unusual or unstable geologic features or special reclamation considerations.

Direct Impacts:
For both the Waid Quarry and the loadout/processing site, soil horizons would be disrupted. The impacts would be minor, as salvaged overburden and/or soil would be replaced, contoured to match surrounding topography, and then seeded.

Secondary Impacts:
For both the Waid Quarry and loadout/processing site, the secondary impacts would consist of some erosion. However, those impacts would be minimal given the limited precipitation in the area and the rocky conditions at the site.
2. WATER QUALITY, QUANTITY, AND DISTRIBUTION

Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?

Groundwater

Beaver Creek Quarry:
The closest well to the Beaver Creek Quarry is located approximately 4,200 feet from the quarry. The average depth of wells within 1.5 miles of the site is 82 feet below ground level (bgl). The difference between the elevation of the Beaver Creek Quarry and surface elevation of the closest well is 390 feet, making the depth to water at the quarry approximately 472 feet.

A spring surfaces approximately 90 feet from the edge of the road and is located about 1,650 feet from the Beaver Creek Quarry in a southern direction. The spring delivers around 2 gallons of water per minute (gpm). The spring is located at an elevation about 243 feet lower than the quarry elevation. The spring runs into a rubber tire stock tank and then overflows into a small sump covering approximately 280 square feet. Any overflow from the sump runs down a small drainage to the south, where it percolates into the ground within a very short run. The spring seldom flows, except during heavy rains or spring snow melt. There is an existing farm road that provides access to the site.

Figure 7: Beaver Creek site map

Direct Impacts:
To date, no groundwater has been encountered at the Beaver Creek Quarry and groundwater is not expected to be encountered in the future at the quarry. There would be no direct impacts to water quality or quantity as groundwater would not be encountered. No impacts to the spring are expected. The access road has a spring with a small sump alongside it. Berms were placed to divert water from entering the spring area. Silt fencing has also been installed near the spring.
Water is currently brought in from two sources: the town of Havre and a well located at the T. P. Construction Inc. shop. Water would continue to be hauled to the site. At the Beaver Creek Quarry site, T.P. Construction Inc. also has a water tank for dust control at the crusher.

There would be no direct impacts to the loadout/processing site as groundwater has not been encountered and is not expected to be encountered as part of the mining operation.

Secondary Impacts:
For both the Beaver Creek Quarry and the loadout/processing site, there would be no secondary impacts to water quantity, quality and distribution due to the lack of groundwater in the area and the use of best management practices (BMPs) and spill kits.

Waid Quarry:
The top of the butte is approximately 3,025 feet in elevation. Bullhook Creek is at an elevation of about 2,764 feet, about 261 feet lower than the top of the butte. A spring is located near the creek at an elevation of about 2,777 feet, about 248 feet lower than the top of the butte. The spring is located about 275 feet away from the proposed T. P. Construction Inc. disturbances.

![Figure 8: Waid Quarry site map](image)

Direct Impacts:
There is a spring located near the base of the Waid Quarry. The spring is located west of and about 213 feet below the elevation of the quarry. To date, no groundwater has been encountered at the quarry and none is expected to be encountered as part of the proposed operations. There would be no direct impacts to water quality or quantity as groundwater would not be encountered. No impacts to the spring are expected.
Water is currently brought in from two sources: the town of Havre and a well located at the T. P.
Construction Inc. shop. Water would continue to be hauled to the site in a truck with a pump
system.

There would be no direct impacts to the loadout/processing site as groundwater has not been
encountered and is not expected to be encountered as part of the proposed operations.

Secondary Impacts:
There would be no secondary impacts from the quarry and loadout/processing site due to the lack
of groundwater in the area and the use of BMPs and spill kits.

Surface Water

Beaver Creek Quarry:
Reservoir 1: The reservoir is located in a drainage that is 1,900 feet north east of the proposed
Beaver Creek Quarry. The surface water elevation of the reservoir is 2,893 feet, which is 258 feet
lower than the quarry. Drainage enter the reservoir from the north and east side. A drainage channel
from the direction of the quarry enters on the west side of the reservoir.

Reservoir 2: Runoff from and below Reservoir 1 travels approximately 2,200 feet before entering
Reservoir 2. The drainages only flow during and immediately after extremely heavy rain or snow
melt events. Reservoir 2 is located approximately 2,800 feet from the Beaver Creek Quarry and
approximately 300 feet from the closest point on the haul route. The surface water elevation of
Reservoir 2 is 2,838 feet, which is 313 feet lower than the quarry elevation. Reservoir 2 is
approximately 850 feet from the stockpile area and would capture any flow from the stockpile
area.

Aside from man-made reservoirs, there are no natural bodies of surface water within 1,000 feet of
the permit site. Berms and silt fencing would continue to be used to control storm water runoff.
Much of the area has been seeded to help hold soils in place. BMPs and concurrent reclamation
would be used to prevent sediment from reaching streams.

Direct Impacts:
There would be no direct impacts to surface water from the quarry and loadout/processing site
for several reasons. Rainfall in the area is limited and averages about 11.2 inches per year.
BMPs that would control storm water runoff and prevent sediment and/or spilled petroleum
products from leaving the site.

Secondary Impacts:
There would be no secondary impacts from the quarry and loadout/processing site due to the lack
of surface water near the site and use of BMPs to control storm water.

Waid Quarry:
Reservoir 1 is located approximately 680 feet to the north of the stockpile area and is adjacent to
the west edge of the county road. The stockpile area is located at 2,973 feet in elevation and surface
water of Reservoir 1 is located at 2,903 feet. The stockpile area is about 70 feet higher than
Reservoir 1. The stockpile site is located at the top of a rise. Runoff flows from the stockpile area
to the north of the stockpile site and adjacent roadway towards Reservoir 1.

Reservoir 2 is located approximately 540 feet to the southeast and is adjacent to and on the east
side of the county road. The drainage from Reservoir 2 crosses under the road and flows to the southwest. The elevation of Reservoir 2 is at 2,935 feet, which is 38 feet lower that the stockpile area.

All runoff would flow to existing drainages. Aside from man-made reservoirs, there is no surface water within 500 feet of the quarry. BMPs and concurrent reclamation would help to prevent sediment from reaching streams. There should be no impacts to surface water from the operation.

**Direct Impacts:**
The use of BMPs would control storm water runoff and help to prevent sediment and/or spilled petroleum products from leaving the quarry and loadout/processing site.

**Secondary Impacts:**
There would be no secondary impacts due to the lack of surface water in the immediate area and the use of BMPs to control storm water from the quarry and loadout/processing site.

3. **AIR QUALITY:**
*Would pollutants or particulate be produced? Is the operation influenced by air quality regulations or zones (Class I airshed)?*

Minimal particulates would be produced or become airborne during operations. Fugitive dust would be controlled by spraying water on working surfaces. The operator would be expected to maintain compliance with Montana's law regarding the need to take reasonable precautions to control airborne particulate matter according to the Administrative Rules of Montana (ARM) 17.8.308. Gaseous products of combustion (oxides of nitrogen and carbon monoxide) would result from this operation, specifically from gas and diesel fuel-fired equipment.

Water for dust control is currently taken from two sources, the town of Havre and a well located at the T. P. Construction Inc. shop. Water would continue to be hauled in a truck with a pump system. The Beaver Creek Quarry has a water tank for dust control located at the crusher. The quantity of water used for dust control is dependent on environmental conditions such as rainfall, wind, time of year, and overall surface conditions.

**Direct Impacts:**
There would be some exhaust fumes and dust would be produced by the on-site equipment at both quarries and loadout/processing sites Dust control would be employed to meet particulate emission requirements. The level of gaseous emissions from the site would be minimal due to the small number of fuel-fired equipment in use at the sites. Overall air quality impacts would be minimal.

**Secondary Impacts:**
For both quarries and loadout/processing sites, secondary impacts resulting from blowing dust would be minimal as roads would be sprayed with water.

4. **VEGETATION COVER, QUANTITY AND QUALITY:**
*Would vegetative communities be significantly impacted? Are any rare plants or cover types present?*
Beaver Creek Quarry:
The surrounding area consists of dryland grazing. Vegetation found at the quarry and loadout/processing site includes but is not limited to the following: native and introduced wheatgrasses including crested, thickspike, pubescent, slender, bluebunch, and western; fescues including rough and sheep; other native grasses including blue gramma, Sandburg bluegrass, needle and thread, and prairie junegrass. Forbs found on site include clover, curlycup gumweed, kochia, western yarrow, and cocklebur. Shrubs found at the sites include silver sagebrush, fringed sagewort, and winterfat. Cattails are found in drainage areas. Canadian thistle is sprayed, although not located within the quarry site.

Waid Quarry:
Vegetation found at the quarry and loadout/processing site includes but is not limited to the following plants: native and introduced wheatgrasses including: crested, thickspike, pubescent, slender, bluebunch, and western; fescues including rough and sheep; other native grasses including blue gramma, Sandburg bluegrass, needle and thread, and prairie junegrass. Forbs found on site include clover, curlycup gumweed, kochia, western yarrow, and cocklebur. Shrubs found at the sites include silver sagebrush, fringed sagewort, and winterfat. Cattails are found in drainage areas. Canadian thistle is sprayed although not located within the quarry site. The site has had sporadic Russian thistle found along the County road. Other species found include: yucca, buffaloberry, snowberry, and cinquefoil.

No rare or endangered vegetation has been found at either the quarry or loadout/processing site according to the natural heritage review.

Direct Impacts:
Due to the nature and proposed scale of the operations and sparseness of vegetation, impacts to vegetative cover, quantity, or quality, would be minor as vegetation is removed to allow mining. Disturbed areas would be reclaimed concurrently as an area is quarried out. No threatened or endangered species have been noted in the area. If any threatened or endangered vegetation were to be encountered, work would stop immediately, the area marked off and secured, and the appropriate agencies notified. Direct impacts would be minor as areas would be concurrently reclaimed as mining progressed.

Secondary Impacts:
There would be secondary impacts at both the quarry and loadout/processing sites that would consist of the propagation of noxious weeds. The Hill County Weed Management Control Plan would be applicable to this operation and concurrent reclamation, consisting of replacement of soil and revegetation, would take place. The resulting impacts would be minor.

5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:
Is there substantial use of the area by important wildlife, birds or fish?

Both quarries and loadout/processing sites are frequented by mule and whitetail deer, antelope, rabbits, mice, rattlesnakes, eagles, and hawks. None of the sites have threatened or endangered species or sage grouse habitat. A search of the Montana Natural Heritage program did not show any listings for species of special concern animals, birds, or fish which are present within the quarries or loadout areas.
Figure 9: Beaver Creek Quarry: The blue dot is the approximate location of the quarry.

Figure 10: Waid Quarry: The blue oval is the approximate quarry location of the quarry and
stockpile sites. The length of the oval includes the access road.

Direct Impacts:
With the sparse vegetation and rocky terrain, little to no suitable habitat is present in either the quarries or loadout/processing sites and therefore impacts to wildlife are not expected. To date, no impacts have been noted from the ongoing operations at either site under the SMESs. If any threatened or endangered species were to be encountered, work would stop immediately, the area would be marked off and secured, and the appropriate agencies notified.

Secondary Impacts:
For both the quarries and loadout/processing sites there would be no secondary impacts due to the sparse vegetation and rocky terrain.

6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:
Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?

There are no known threatened or endangered species or species of special concern within the proposed permit areas. The surrounding areas have been dryland grazed for many years and the proposed permit areas have been quarried for several years under a SMES.

Direct Impacts:
No unique, endangered, fragile, or limited environmental resources have been identified at the quarries and loadout/processing sites. The proposed activity would represent a continuation of the mining that has been occurring since 2013 under a SMES. As there are no threatened or endangered species, wetlands, or species of special concern in the project areas, direct impacts to unique, endangered, fragile or limited environmental resources would not occur.

Secondary Impacts:
There would be no secondary impacts at the quarries or loadout/processing sites due to the lack of suitable habitat, wetlands, or species of special concern.

7. HISTORICAL AND ARCHAEOLOGICAL SITES:
Are any historical, archaeological or paleontological resources present?

Beaver Creek Quarry:
There are no signs of historical or archaeological activities at the quarry or loadout/processing site. The upper 40 feet of the quarry has been removed over the years.
Due to the location of this quarry and others that are similar within the area, the former butte would not have been used for vision quests or other ceremonies (Ruthann Knudson Ph. D.)

Waid Quarry:
A cultural resource inventory and evaluation was performed before the start of mining for the Waid Quarry site (24HL1587). Ruthann Knudson Ph. D. was hired to acquire all necessary information and file applications for this site. The quarry was recommended as being eligible for listing on the National Register of Historic Places, but its continued use as a quarry is recommended to not be
an adverse impact. The quarry was excavated in 1955 to provide rip-rap for the Bullhook Diversion Dam. No other sites have been identified.

**Direct Impacts:**
No other historical, archaeological, or other cultural sites have been identified for either of the quarries or loadout/processing sites that would be impacted, aside from that noted for the Waid Quarry. In addition, the SMES sites have been previously disturbed by mining and no historical and archaeological sites have been reported. No impacts to historical or archaeological sites would result. If cultural resources are encountered during quarrying, activities would stop and the discovery reported to the State Historic Preservation Office (SHPO) immediately.

**Secondary Impacts:**
There would be no secondary impacts from the quarries or loadout/processing sites due to the lack of historical or archaeological sites.

8. **AESTHETICS:**
*Is the proposed operation on a prominent topographic feature? Would it be visible from populated or scenic areas? Would there be excessive noise or light?*

**Beaver Creek Quarry:**
The quarry site is a rocky butte. Mining could reduce the butte to the surrounding ground elevation. Aside from the residence adjacent to the loadout/processing area (the crusher operator), the next closest resident to the loadout/processing area is approximately 650 feet to the southwest. The closest residence to the quarry site is about 3,000 feet. T. P Construction Inc. started operations in 2010. To date no issues related to site operations have been noted. The surrounding areas are dryland grazing. No other mining is taking place in the area.

**Waid Quarry:**
This quarry is a Shonkinite dike originally mined in 1955. T. P. Construction Inc. started mining it under a SMES in 2013. The closest residence is approximately 4,200 feet from the quarry and about one mile from the loadout/processing area. No other mining is taking place in the area.

**Direct Impacts:**
The closest residence is approximately 3,000 feet from the Beaver Creek Quarry, aside from the house of the crusher operator. The nearest residence to the loadout/processing site is about 2,000 feet away. The closest residence to the Waid Quarry is about 4,200 feet from the quarry and about one mile from the loadout/processing site. There are no surface disturbances adjacent to the quarries or loadout/processing sites and no other mining is taking place in the area.

The impact from noise and lights would remain the same as under existing operations at all sites. The impacts from noise and light are minor due to the relatively small scale of operations for both equipment and hours of operation. The direct impacts to aesthetics at all sites would be minimal due to the quarry being partially shielded by rock ridges and all sites having existing product stockpiles.

**Secondary Impacts:**
There would be no secondary impacts to the sites as there are few residences in the area. No impacts to passing traffic are anticipated. The operating permit would be incorporating two
existing SMES sites that have operated for several years. Additional impacts, beyond those realized under the past SMES operations, are not expected.

9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:
Would the proposed operation use resources that are limited in the area? Are there other activities nearby that would affect the expansion?

Beaver Creek Quarry:
Hill County Electric has a 3-phase power line running east and west on the north side of the processing area. T.P. Construction Inc. had a 25 KVA transformer installed for the processing area to run the crusher and screening plant. It is a 600-amp service, 480-volt, 3 phase power source. Other than these existing connections, no other utilities would be affected by the operation. There are no sources of water at the site.

Waid Quarry:
The operation uses its own power sources from on-board equipment engines. There is no commercial electrical power to the site. There are no sources of water at the site.

Direct Impacts:
Currently, the Beaver Creek Quarry uses grid power. The Waid Quarry is not connected to the grid. This site configuration would not change for the proposed action. Any water needed for dust suppression would come either from the town of Havre or a well located west of town at the TP Construction Inc. shop. The demands on environmental resources of land, water, air, or energy would be minor because the proposed operations would be similar to those demands that are currently taking place and because the overall operation is relatively small in scale. There would be no impacts to the loadout/processing sites.

Secondary Impacts:
For all sites there would be no secondary impacts due to the relatively small scale and location of the quarries and loadout/processing sites.

10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:
Are there other activities nearby that would affect the proposed operation?

There are no activities in the area that would affect the operation. Aside from the current quarry operations, the surrounding land use is livestock grazing.

Direct Impacts:
The overall terrain is steep and rocky at the quarry sites. There are no known other industrial land uses in the area. Recreational activities would remain the same in the surrounding area. The proposed permit areas are privately owned, so no change in recreational activities is expected. No impacts to other environmental resources are likely. As there would be very limited disturbance outside of the current footprint, additional impacts on other environmental resources are not expected to occur for the quarries or loadout/processing sites.

Secondary Impacts:
For all sites there would be no secondary impacts due to the relatively small scale and location of
the sites. The operating permit would incorporate two existing operating SMES sites, so additional impacts beyond those realized today are not expected.

11. HUMAN HEALTH AND SAFETY:
Would this proposed operation add to health and safety risks in the area?

**Beaver Creek Quarry:**
The crusher operator lives at the gate to the loadout/processing site and can watch over the operation. Access to the edge of the highwall is blocked by rip-rap set back 30 feet from the edge. The berm was established to meet MSHA requirements. The owner of the company has a house near the only other gate into the area where the mine and loadout/processing sites are located. The pasture is leased and the lessee also watches over the area.

**Waid Quarry:**
The access point to the quarry has a gate and cattle guard at the entrance. The area is posted “No trespassing, no hunting without permission.” The owner of the property lives down the road and passes by several times per day.

**Direct Impacts:**
Currently, some safety risks exist at the active mining sites, as does the potential for health risks. No additional impacts are expected. The number of employees is expected to remain the same as are traffic density and patterns. The proposed quarries and loadout/processing sites are on private land with fencing, locked gates, and signage restricting access. Impacts to human health and safety from the operation are expected to be minor.

**Secondary Impacts:**
For all sites there would be no secondary impacts due to the relatively small scale of the operations and the location of the sites.

12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:
Would the proposed operation add to or alter these activities?

Adverse impacts would not be expected on any industrial, commercial, agricultural activities, and/or production in the area. DEQ searched for other projects occurring, or under concurrent consideration near the proposed operation, and none were found.

**Direct Impacts:**
All sites are currently being operated under a SMES. There are no other activities including, industrial, commercial, or agriculture operations in the area. No direct impacts to industrial, commercial, and agricultural activities, and production would result from this action.

**Secondary Impacts:**
For all sites, there would be no secondary impacts due to the scale and location of the sites.

13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:
Would the proposed operation create, move or eliminate jobs? If so, what is the estimated number?
All sites are currently operating under a SMES. The SMESs are proposed to be incorporated into the operating permit. The workforce is not expected to either increase or decrease as a result of this proposed action.

**Direct Impacts:**
All activities would be conducted by current employees. No additional work force is anticipated. If market conditions fluctuate, the work force may marginally increase or decrease. No direct impacts to the quantity and distribution of employment would result from this action.

**Secondary Impacts:**
For all sites there would be no secondary impacts as the current workforce would be maintained.

14. **LOCAL AND STATE TAX BASE AND TAX REVENUES:**
Would the proposed operation create or eliminate tax revenue?

The sale of stone and aggregate provides tax revenue to the state and/or the federal government. The landowner may get royalties from the operation.

**Direct Impacts:**
The production and work force at all sites is not anticipated to increase from this project, therefore, no change in tax revenues would be anticipated. An Operating Permit is necessary for continued operation of the sites. Continued operation of the sites under an Operating Permit would result in minor impacts to the local and state tax base and tax revenues. Those minor impacts would be the same as the impacts that have been realized from past SMES operations.

**Secondary Impacts:**
For all sites there would be no secondary impacts due to the relatively small scale and nature of this particular action.

15. **DEMAND FOR GOVERNMENT SERVICES:**
Would substantial traffic be added to existing roads? Would other services (fire protection, police, schools, etc.) be needed?

All sites are on private land and operations would be a continuance of current activities. No overall increase in traffic or drains on other governmental services are anticipated.

**Direct Impacts:**
All sites are currently in operation and no increase in employment or production is anticipated from this project. As such, no increase in traffic or other demands for government services would be anticipated.

**Secondary Impacts:**
For all sites there would be no secondary impacts due to the relatively small scale and nature of this proposed action.

16. **LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:**
Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?

All sites are on private land which is being used for dryland grazing. There are no known zoning or other restrictions in place.
Direct Impacts:
No environmental or zoning plans are in effect for the sites; therefore, no impacts to locally adopted environmental plans and goals would result from this action.

Secondary Impacts:
For all sites there would be no secondary impacts to locally adopted environmental plans and goals due to the lack of such plans for this area.

17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:
Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?

Current land use for all sites is dryland grazing. No wilderness or recreational activities are within or near the proposed operations.

Direct Impacts:
All sites are located on private property with active mining activities taking place. The proposed quarries and loadout/processing sites are not near, nor do they provide access to, recreational or wilderness areas. As a result, no impacts to access or quality of recreational and wilderness activities would result from this proposed action.

Secondary Impacts:
For all sites there would be no secondary impacts due to the scale and location of the proposed project.

18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:
Would the proposed operation add to the population and require additional housing?

For all sites, the activities would be a continuance of current practices using the existing workforce. No additional housing would be needed.

Direct Impacts:
All sites are currently in operation, with no change in workforce anticipated. No direct impacts to density and distribution of population and housing would result from this action due to the change from operating under an operating permit rather than operating under two unique SMESs.

Secondary Impacts:
For all sites, there would be no secondary impacts to the density and distribution of population and housing because no new jobs would be created and no new housing would be required under this action.

19. SOCIAL STRUCTURES AND MORES:
Is some disruption of native or traditional lifestyles or communities possible?

All operations are on private land which has been dryland grazed and has had mining occur under two unique SMESs. To date, no disruption of native or community lifestyles have been noted.

Direct Impacts:
Due to the location of these sites and the fact that no additional employment is anticipated, no disruption of native or traditional lifestyles would be expected.

**Secondary Impacts:**
For all sites, there would be no secondary impacts to social structures and mores that would occur due to the scale and location of the project.

20. **CULTURAL UNIQUENESS AND DIVERSITY:**
*Would the action cause a shift in some unique quality of the area?*

There are no unique qualities in the area. The surrounding areas are being used for dryland grazing.

**Direct Impacts:**
There are no unique qualities that would be affected by the proposed operations. The quarries and loadout/processing sites have been used for dryland farming and have limited use.

**Secondary Impacts:**
There would be no secondary impacts to cultural uniqueness and diversity due to the relatively small scale of the operation, the location, and the nature of the proposed projects.

21. **PRIVATE PROPERTY IMPACTS:**
*Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required. Does the proposed regulatory action restrict the use of the regulated person’s private property? If not, no further analysis is required. Does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction would be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives.*

The proposed operations are on private land. Other than the requirements of the State of Montana Metal Mine Reclamation Act with regards to quarry operations and reclamation, no impacts or restrictions would be placed on said land.

22. **OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:**
Due to the nature of the proposed activities, and the limited operations, no further direct or secondary impacts would be anticipated from these proposed activities.

**ALTERNATIVES CONSIDERED:**
In addition to the proposed actions, DEQ also considered the "no action" alternative. The "no action" alternative would deny the issuance of the Operating Permit to TP Construction Inc. T. P. Construction Inc. would lack the authority to continue to quarry rock on the properties beyond what is allowed under the SMESs. Any potential impacts that would be authorized under the quarry operation would not occur. However, DEQ does not consider the "no action" alternative to be appropriate because T. P. Construction Inc. has demonstrated a willingness to comply with all applicable rules and regulations in the submitted proposal as required for permit issuance. The no action alternative forms the baseline from which the impacts of the proposed action can be measured.
PUBLIC INVOLVEMENT:
Scoping for this proposed action consisted of internal and external efforts to identify substantive issues and/or concerns related to the proposed operation. Internal scoping consisted of internal review of the environmental assessment document by DEQ staff. External efforts included queries to the following websites/databases/personnel:
- Montana Department of Environmental Quality
- Montana Cadastral Mapping Program
- USDA NRCS Soil Survey
- Montana Natural Heritage Program

OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION:
None.

CUMULATIVE EFFECTS:
This environmental review considered the proposed operation as submitted by T. P. Construction Inc. The proposed operations would be located on private land. Impacts from these operations would be minimal and the sites would be fully reclaimed after the conclusion of operations in quarried out areas. The proposed operations would not contribute to any negative effects in the area. Aside from the 1952 disturbance that provided construction material for construction of the Bull Creek Diversion Dam, DEQ searched, but did not find information regarding any other federal, state, or private operations within the recent past or proposed for the near future that would add to the cumulative effects of impacts related to these operations.

NEED FOR FURTHER ANALYSIS AND SIGNIFICANCE OF POTENTIAL IMPACTS
When determining whether the preparation of an environmental impact statement is needed, DEQ is required to consider the significance criteria set forth in ARM 17.4.608, which are as follows:
1. The severity, duration, geographic extent, and frequency of the occurrence of the impact;
2. The probability that the impact would occur if the proposed action occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact would not occur;
3. Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts;
4. The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values;
5. The importance to the state and to society of each environmental resource or value that would be affected;
6. Any precedent that would be set because of an impact of the proposed action that would commit the department to future actions with significant impacts or a decision in principle about such future actions; and
7. Potential conflict with local, state, or federal laws, requirements, or formal plans.

The two quarries and loadout/processing sites are currently covered by SMES #12-004 and #12-004B. Due to the level of disturbance and operational dependence, the applicant proposed that these sites be included into the proposed Operating Permit #00194. The severity, duration, geographic extent, and frequency of the occurrence of the impacts associated with the proposed activities would be limited. T. P. Construction Inc. is proposing to quarry up to 35 total acres with
a life of mine of about 15 years. The quarry activities would result in removal of material and levelling of the rocky knob and hills to the surrounding ground elevations.

While the areas are rocky with little soil, all salvageable overburden and soils would be used for reclamation. Disturbance areas would be seeded after soil is replaced.

The Beaver Creek Quarry was originally a rocky volcanic butte with little to no vegetation growing on it. Approximately 40 feet of the volcanic butte has been mined. Proposed total permit boundary, including the loadout/processing site, would be about 20 acres, which would also be the size of the permitted disturbance boundary. The surrounding area is dryland grazing and the existing access road would be maintained.

The Waid Quarry is a shonkinite dike, originally mined in 1955 to provide rip-rap for the Army Corp. of Engineers project on Bullhook Creek—the Bullhook Diversion Dam. The proposed permitted area, including the loadout/processing site, is about 31.5 acres, with about 14.3 acres permitted for disturbance. The highwall is estimated at approximately 30 feet in height.

Approval of the project would mean continuation of mining at the sites. The activities would include removing and stockpiling any available soils/overburden for reclamation, then exposing the underlying layer of marketable rock. The exposed rock would then be mined, transported, prepared for sale, and stored for prospective customers to view. After an area has been mined out, any salvaged soils and/or overburden would be replaced and contoured to match the surrounding lands and then seeded with the approved seed mix.

The land proposed to be disturbed does not contain unique, endangered, fragile, or limited environmental resources. The surface disturbances would be concurrently reclaimed to the extent possible. DEQ does not believe that the proposed activities by T. P. Construction Inc. would have any growth-inducing or growth-inhibiting aspects.

Due to the nature of the sites, soils are limited. Salvaged and stockpiled soil would be laid back at closure. The proposed activities may temporarily displace individual animals. Displacement of individual animals would likely have already occurred with the current mining at each site. This impact, however, would only occur during actual operations. There are no federally listed threatened or endangered species or habitats identified within the greater proposed permit area.

As discussed in this Environmental Assessment, DEQ has not identified any long-term or significant impacts associated with the proposed activities on any environmental resource.

Issuance of an approval to T. P. Construction Inc. does not set any precedent that commits DEQ to future actions with significant impacts or a decision in principle about such future actions. If T.P. Construction Inc. submits an amendment to conduct additional mining, or another operating permit application, DEQ is not committed to issuing those authorizations. DEQ would conduct an environmental review for any subsequent authorizations sought by T. P. Construction Inc. that would require such a review. DEQ would make a permitting decision based on the criteria set forth in the Metal Mine Reclamation Act. Issuance of an approval to T. P. Construction Inc. does not set a precedent for DEQ's review of other applications, including the level of environmental review. The level of environmental review decision is made based on a case-specific consideration of the criteria set forth in ARM 17.4.608.

Finally, DEQ does not believe that the proposed activities by T. P. Construction Inc. would conflict
with any local, state, or federal laws, requirements, or formal plans.

Based on a consideration of the criteria set forth in ARM 17.4.608, the proposed operations are not predicted to significantly impact the quality of the human environment. Therefore, preparation of an environmental assessment is the appropriate level of environmental review under the Montana Environmental Protection Act.

**Environmental Review Prepared By:**
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**Approved By:**

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Date: 03/25/19