Montana Department of
ENVIRONMENTAL QUALITY
Brian Schweitzer, Governor
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PRELIMINARY DETERMINATION
ON PERMIT APPLICATION

Date of Mailing: March 2, 2012

Name of Applicant: NorthWestern Energy

Source: NorthWestern Energy- Dave Gates Generating Station at Mill Creek

Proposed Action: The Department of Environmental Quality (Department) proposes to issue a permit, with conditions, to the above-named applicant. The application was assigned Permit Application Number 4255-03.

Proposed Conditions: See attached.

Public Comment: Any member of the public desiring to comment must submit such comments in writing to the Air Resources Management Bureau (Bureau) of the Department at the above address. Comments may address the Department's analysis and determination, or the information submitted in the application. In order to be considered, comments on this Preliminary Determination are due by April 2, 2012. Copies of the application and the Department's analysis may be inspected at the Bureau's office in Helena. For more information, you may contact the Department.

Departmental Action: The Department intends to make a decision on the application after expiration of the Public Comment period described above. A copy of the decision may be obtained at the above address. The permit shall become final on the date stated in the Department's Decision on this permit, unless an appeal is filed with the Board of Environmental Review (Board).

Procedures for Appeal: Any person jointly or severally adversely affected by the final action may request a hearing before the Board. Any appeal must be filed by the date stated in the Department's Decision on this permit. The request for a hearing shall contain an affidavit setting forth the grounds for the request. Any hearing will be held under the provisions of the Montana Administrative Procedures Act. Submit requests for a hearing in triplicate to: Chairman, Board of Environmental Review, P.O. Box 200901, Helena, MT 59620.

For the Department,

Vickie Walsh

Vickie Walsh
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DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air and Waste Management Bureau
P.O. Box 200901, Helena, Montana 59620
(406) 444-3490

DRAFT ENVIRONMENTAL ASSESSMENT (EA)

Issued To: NorthWestern Energy
40 E. Broadway
Butte, MT 59701

Montana Air Quality Permit (MAQP) Number: #4255-03

Preliminary Determination Issued: 03/02/2012
Department Decision Issued:
Permit Final:

1. *Legal Description of Site*: NWE facility also known as the Dave Gates Generating Station at Mill Creek (DGGS) located near the intersection of MT-1 and county road 273 approximately 3 miles southeast of Anaconda, Montana. The property is located within a 50-acre parcel in the NW¼ of Section 17 and the SW ¼ of Section 8, Township 4 North, Range 10 West in Deer Lodge County, Montana.

2. *Description of Project*: This permit action would update the facility name from Mill Creek Generating Station (MCGS) to DGGS. Additionally, the permit action would allow an extension for the construction of Unit #4. Originally MAQP #4255-02 allowed NWE phased in construction of up to four simple-cycle, dual fuel powered generating units each rated at 49.6 megawatts (MW). However, NWE only constructed three of the four units.

3. *Objectives of Project*: The objective of the project would be to modify some of the equipment and update the name of the facility and allow an extension on construction of Unit #4.

4. *Alternatives Considered*: In addition to the proposed action, the Department also considered the "no action" alternative. The "no action" alternative would deny the issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the "no action" alternative to be appropriate because NWE demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the "no action" alternative was eliminated from further consideration.

5. *A Listing of Mitigation, Stipulations, and Other Controls*: A list of enforceable conditions, including a Best Available Control Technology (BACT) analysis, would be included in MAQP #4255-03.

6. *Regulatory Effects on Private Property*: The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions would be reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and would not unduly restrict private property rights.

7. The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The "no action" alternative was discussed previously.

Potential Physical and Biological Effects							
		Major	Moderate	Minor	None	Unknown	Comments Included
A.	Terrestrial and Aquatic Life and Habitats			X			yes
B.	Water Quality, Quantity, and Distribution			X			yes
C.	Geology and Soil Quality, Stability, and Moisture			X			yes
D.	Vegetation Cover, Quantity, and Quality			X			yes
E.	Aesthetics			X			yes
F.	Air Quality			X			yes
G.	Unique Endangered, Fragile, or Limited Environmental Resource			X			yes
H.	Demands on Environmental Resource of Water, Air, and Energy			X			yes
I.	Historical and Archaeological Sites			X			yes
J.	Cumulative and Secondary Impacts			X			yes

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS: The following comments have been prepared by the Department.

A. Terrestrial and Aquatic Life and Habitats

The existing facility is located within the South Uplands Unit of the Anaconda Smelter National Priorities List (NPL) at the existing Mill Creek electrical power substation that currently covers approximately 10 acres.

Impacts to terrestrial and aquatic life and habitats from this permit action would be minor because of the relatively small portion of land that would be disturbed during construction of Unit #4. The area has already been designated for this unit and was previously discussed in the EA for MAQP #4255-00. Terrestrials such as livestock, deer, elk, moose, and rodents would use the general area near the facility. However, the area surrounding DGGS is fenced to limit access to the site. Fencing would not restrict access from all animals that frequent the area, but would discourage most animals from entering the facility.

There are no wetlands listed for the project site according to the Riparian and Wetland Research Program (RWRP) database, the Natural Heritage Wetland Program (NHWP) database, or the Department's database. However, the final design report for the South Opportunity Uplands area of the Anaconda Superfund Site indicates the presence of wetland north of the existing substation and east of the project site along Mill Creek. These wetlands were part of delineation activities that occurred in 1999 and since then the project site surface conditions have been altered to address arsenic-impacted soils. However, it is anticipated that activities associated with the proposed permit action would have no adverse impacts on identified but altered wetlands.

Construction of Unit #4 would result in very little impact on the terrestrial and aquatic life and habitats because there would be minimal disturbance and any disturbance would be temporary and of short duration. As stated above, the area is currently occupied by the Mill Creek electrical substation and the DGGS. The proposed modification to the DGGS facility would cause minor impacts to the area. Overall, the impacts from this project to terrestrial and aquatic life and habitats would be minor.

B. Water Quality, Quantity, and Distribution

There are no surface water bodies on the site and the nearest surface water body would be Mill Creek, which would be located several hundred feet southeast of the existing facility. This permit action would grant an extension to construct a previously permitted unit and would not cause additional impact. As proposed, there would be no additional impact on the water supply for the City of Anaconda that results from this permit modification. Therefore, the proposed permit modification would result in minor impacts to water quality, quantity, and distribution in the area.

C. Geology and Soil Quality, Stability, and Moisture

Impacts to the geology and soil quality, stability, and moisture from this facility would be minor because the permit modification would impact a relatively small portion of land and the amount of resulting deposition of the air emissions would be small. Unit #4 would be located within the existing DGGS and therefore any disruption or displacement of soils during the construction would be contained to the existing fenced area.

According to information provided previously by the applicant, available geologic mapping indicates that the general geology in the project area consists of "Surficial Sedimentary Deposits: **QS**-Alluvium, and terrace gravel, gravel deposits on pediment surfaces, and landslide and travertine deposits: till, glacial lake, and outwash deposits" and "Sedimentary Deposits and Rocks: **Ts**- Fan and gravel deposits on pediment conglomerate, sandstone, mudstone, and volcanic ash beds".

There are no known unique geologic or physical features at the site. NWE previously reported that in 2007, two bore holes were drilled to a depth of 20 feet below ground surface by SK Geotechnical at the facility location. Topsoil and the root zone were encountered at two to three inches below ground surface. Below the topsoil and root zone to the total depth, the soil profile was alluvium/glacial deposits consisting of poorly graded gravels with silt, sand, and cobbles. Groundwater was not observed in the bore holes. The subsurface soils are considered more than adequate to support the foundations for the simple cycle combustion units. The soil stability in the immediate vicinity would be impacted by construction activities, but disturbances would be temporary. The proposed permit modification would not discharge any material to the soil. Installing the proposed equipment would result in minimal impact on geology and soil quality, stability and moisture because the construction would be temporary and of short duration. Overall, the Department believes there would be minor impacts to geology, soil quality, stability, and moisture.

D. Vegetation Cover, Quantity, and Quality

The proposed project would result in minor impacts on the vegetative cover, quantity, and quality in the immediate area because only a small amount of property would be disturbed.

The project site would be located in an existing industrial area where vegetation is sparse to none. In comparison to the surrounding area, the disturbance of this acreage would be very small. The vegetated areas outside of this proposed project include: small stands of cottonwoods and other deciduous species, grasslands with Great Basin wildrye and redtop, and scattered shrub lands with rabbitbrush (Chrysothamnus nauseosus), currant and Woods rose. See Section 8.D of this EA. In addition, as described in Section 7.F of this EA, the impacts from the air emission from this facility are minor.

There are no known endangered or threatened plant species at the project site. This permit modification would result in minimal disturbance to the land and the disturbances would be temporary. Most of the newly disturbed areas would be restored to their previous status after installation of equipment. The corresponding deposition of the air pollutants on the surrounding vegetation would also be minor.

Any disturbances would be of short duration and the area would be returned to its current status. Therefore, the proposed project would result in minor impacts on the vegetative cover, quantity, and quality.

E. Aesthetics

Impacts to the aesthetics of the area from this action would be minor because the permit action merely extends the construction on the existing facility that was already permitted. The land use surrounding the existing project area is primarily agricultural grazing, recreation and open space mixed with commercial/industrial areas for gravel mining and an electrical substation.

The existing facility is visible from various roadways in the area, such as: State Highway-1 located approximately 1 mile to the northeast, Mill Creek Road approximately 1/5 mile to the west, and Willow Glen Road approximately 1/5 mile to the southwest of the site.
The community of Opportunity is located approximately 1.5 miles east of the facility and a gravel pit is located approximately 0.25 miles to the northeast.

Visible emissions from the facility would be limited to 20% opacity. There would not be an increase in odors with this permit action. The proposed change could result in some additional noise during construction but would be temporary.

The area would also receive increased vehicle use as a result of the proposed project; however, the Department does not believe that the amount of vehicle trips in the area would increase substantially over the existing traffic patterns. The vehicles would use the existing roads in the area on route to the roads established as part of the facility. Obviously during construction of the facility, there might be a noticeable increase; however, it would be temporary.

Impacts to the aesthetics of the area from the project would be minor because of these other industrial and commercial operations. Odor would be negligible and visible emissions would be limited to less than 20% opacity. Therefore, the Department believes that aesthetics in the area would only experience minor impacts.

F. Air Quality

The air quality classification of the immediate area is "Unclassifiable/Attainment" for all pollutants (40 CFR Part 81.327). The city of Butte and surrounding area is classified as nonattainment for PM_{10} upon based on 24-hour monitoring values. This PM_{10} nonattainment area (NAA) boundary is about 13 miles (21 kilometers (km)) to the southeast of the DGGS. The closest federally mandatory Class I area is the Anaconda-Pintler Wilderness Area, which is about 16 miles (26 km) southwest of the facility.

This permit action did not require modeling; however, modeling previously completed under MAQP #4255-00 concluded that the Class I Anaconda-Pintler Wilderness Area would not be significantly impacted by DGGS's NOx and PM_{10} emissions. The annual NOx and PM_{10} DGGS emissions were about 1% of their respective modeling significance levels whereas the

24-hour PM_{10} emissions were about 50%. In addition, the modeling results (previously completed) for DGGS demonstrated compliance with the National Ambient Air Quality Standards (NAAQS)/Montana Ambient Air Quality Standards (MAAQS) and Prevention of Significant Deterioration (PSD) increments. The permit action at the DGGS facility would result in no overall emission increases because all emissions were accounted for in the original application. Therefore, this permit action was minor and the Department did not require additional modeling. Overall, the air impacts from the proposed change would be minor.

G. Unique, Endangered, Fragile, or Limited Environmental Resources

To identify any species of special concern in the immediate area of the proposed project, the Department previously contacted the Montana Natural Heritage Program of the Natural Resource Information System (NRIS). The Natural Heritage Program identified one endangered species of special concern in the area of the proposed facility. The species identified is the gray wolf.

In the mid-to-late 1980s, in an effort to restore wolf populations, the wolf was reintroduced into three recovery areas – Northwestern Montana, Central Idaho, and the Greater Yellowstone. Wolf populations have increased throughout the last several decades, however, generally, the wolves usually occupy areas with few roads and little human disturbance so it is unlikely that wolves would be impacted by this project. This permit action extends the amount of time available to NWE to construct Unit #4 which was previously permitted and accounted for. Because the unit would be located at an existing facility (DGGS) in addition a nearby gravel pit and an electrical substation, there would be little additional impact to the wolf population. Therefore, the Department believes there would be minor impacts to any unique, endangered, fragile, or limited environmental resources in the area.

H. Demands on Environmental Resource of Water, Air, and Energy

As described in Section 7.B of this EA, impacts to the water resource would be minor. The proposed modification would not directly discharge any material to the surface or ground water in the area other than a minor amount of stormwater runoff.

As described in Section 7.F of this EA, the impact on the air resource in the area of the facility would be minor. Ambient air modeling for NO_X, CO, VOC, PM, PM_{10}, and SO_2 was conducted for the facility at "worst case" conditions that demonstrates that the emissions from the proposed facility would not exceed any ambient air quality standard.

During construction of Unit #4, there would be minor energy impacts however, impacts would be temporary. No additional impacts to the water quality and quantity would occur because the majority of the facility has already been constructed. The project would result in minor changes of air quality and dispersion would be minimal. Energy use would be minimized due to the operational limitations placed on the facility. Therefore, the Department believes the project would result in minor impacts to demands on environmental resources of water, air, and energy.

I. Historical and Archaeological Sites

The Department previously contacted the Montana Historical Society – State Historic Preservation Office (SHPO) in an effort to identify any historical, archaeological, or paleontological sites or findings near the proposed project. SHPO's records indicate that there are currently no previously recorded cultural properties within the project site. Because of the fact that the site has been previously disturbed, the likelihood of finding undiscovered

or unrecorded historical properties is unlikely. The old Anaconda Copper Company smelter stack, located approximately two miles west of the site, is listed in the National Register of Historic Places.

Impacts on historical and archaeological sites would be minor because the equipment associated with this permit modification would locate within an area that has been previously disturbed and previously designated as DGGS.

Therefore the Department believes that there would be minimal impact to cultural properties. However, should cultural materials be inadvertently discovered during this project SHPO requested that they be contacted to investigate.

J. Cumulative and Secondary Impacts

Overall, the cumulative and secondary impacts from this project on the physical and biological aspects of the human environment would be minor because the impact from the modification would be relatively minor. The proposed equipment would locate in close proximity to existing power lines and a natural gas distribution pipeline. Because the majority of the DGGS project is constructed, the proposed modification would result in minimal and temporary changes. The overall impact due to the project would be minor. Because the proposed equipment would be located at the existing DGGS facility, and would not be located in the PM_{10} nonattainment area, and the fact that NWE has shown previously shown compliance with the NAAQS/MAAQS; the modification would have minor impacts to the surroundings. Therefore, the Department believes that impacts to Air Quality would be minor.

8. *The following table summarizes the potential social and economic effects of the proposed project on the human environment. The "no action" alternative was discussed previously.*

Potential Social and Economic Effects							
		Major	Moderate	Minor	None	Unknown	Comments Included
A.	Social Structures and Mores				X		yes
B.	Cultural Uniqueness and Diversity				X		yes
C.	Local and State Tax Base and Tax Revenue			X			yes
D.	Agricultural or Industrial Production			X			yes
E.	Human Health			X			yes
F.	Access to and Quality of Recreational and Wilderness Activities			X			yes
G.	Quantity and Distribution of Employment			X			yes
H.	Distribution of Population				X		yes
I.	Demands for Government Services			X			yes
J.	Industrial and Commercial Activity			X			yes
K.	Locally Adopted Environmental Plans and Goals				X		yes
L.	Cumulative and Secondary Impacts			X			yes

SUMMARY OF COMMENTS ON POTENTIAL SOCIAL AND ECONOMIC EFFECTS: The following comments have been prepared by the Department.

A. Social Structures and Mores
B. Cultural Uniqueness and Diversity

The proposed permit action would not cause a disruption to any native or traditional lifestyles or communities (social structures or mores, or cultural uniqueness and diversity) in the area because the land use proposal would not be out of place given the industrial land use of the surrounding area. The area is currently occupied by an existing electrical substation and the equipment would be located at the existing DGGS facility. In addition to these industrial land uses, there is an existing gravel pit located north of this facility. The project would not impact social structures or mores because these activities are consistent with activities performed throughout Montana and would be located in an existing industrial area.

C. Local and State Tax Base and Tax Revenue

Most of the DGGS facility is already constructed, so it is estimated that NWE would employ a few (if any) additional people. There may be a few new people on-site during the construction however most likely this would be temporary. Therefore, the Department believes this project would have minor effects to the local and state tax base and tax revenue

D. Agricultural or Industrial Production

The impacts to agricultural and industrial production in the area from this permit modification would impact such a small amount of land, the impact from the air emissions on the land would be small, and the amount of electricity produced to assist other industrial activities within the state is relatively small. The proposed equipment would be located on 50 acres privately owned by NWE, much of which is already occupied by the Mill Creek electrical substation and other previously approved DGGS equipment. The project would not remove any existing land from agricultural production and would add to other industrial uses in the area.

As described in Section 7.F of the EA, the air quality impacts from this facility are minor, and the resulting deposition of the pollutants from the project would consequently also be minor. In addition, as described in Section 7.F, the fact that the DGGS previously complied with the NAAQS (protect public health and promote public welfare) indicates that the impacts from the facility would be minor. Therefore, the Department has determined that the impacts to Agricultural or Industrial Production would be minor.

E. Human Health

As described in Section 7.F of the EA, the impacts from this project on human health would be minor because the impact from the air emissions would be greatly dispersed before reaching an elevation where humans were exposed. Also, as described in Section 7.F, the previously modeled impacts from DGGS, taking into account other dispersion characteristics (wind speed, wind direction, atmospheric stability, stack height, stack temperature, etc.), were well below the MAAQS, NAAQS, and PSD Increments. NWE was not required to conduct additional modeling with this permit modification. However, NWE would be subject to limits and conditions that would ensure that the facility be operated in compliance with all applicable rules and standards. Given these reasons, and the fact that the nearest neighbor is approximately 1.5 miles away, the Department believes that the impact to human health would be minor.

F. Access to and Quality of Recreational and Wilderness Activities

The proposed changes would result in small or no impacts on the access to and quality of recreational wilderness activities. The air emissions from the facility would disperse before impacting any recreational areas.

No significant recreational or wilderness activities exist within the NWE property boundaries and all recreational activities would remain available. Based on the previous modeling analysis (see Section 7.F of the EA) and the distance between and direction from the recreational sites and the NWE facility, there would not be any noticeable impacts. This project would not cause denial of access and would not impact wilderness activities, therefore, the Department determined that this facility would have minor impact to recreational and wilderness activities.

G. Quantity and Distribution of Employment

There would be a minor effect on the employment of the area from this project because it would result in construction-related employment opportunities. As such, any effects would be minor but positive in the area. Therefore, the Department determined that this modification would not negatively impact the quantity and distribution of employment in the area and would have minor impacts, if any.

H. Distribution of Population

The project would not affect the normal population distribution in the area because the permit modification would result in few, if any, new jobs. The facility's operation would result in approximately 11 new positions. However, neither the 11 positions created as a result of facility, nor the numerous temporary construction-related positions would likely affect the distribution of population in the area. Therefore, the Department believes that the distribution of population would not be affected.

I. Demands of Government Services

The demands on government service due to the project modification would be minor, if any, as most of the required permits are already in place. Demands on government services from this facility would be minor because the facility would pay relatively high taxes and require fewer than average government services once all the necessary permits are received. There may be a minor increase in traffic on existing roads in the area during construction, but for the normal operation of the facility traffic increases would be minimal. NWE continues to work with all affected local and state agencies to alleviate any additional demands on Government Services. Therefore, the Department believes the demands on Government Services would be minor.

J. Industrial and Commercial Activity

The area both currently and historically has been primarily an industrial area. The proposed changes would have minor additional impacts to the surrounding area. The project would cause a minor increase in industrial activity in the area during construction. However, given the fact that the area is predominantly industrial, the Department believes that effects to industrial and commercial activity would be minor.

K. Locally Adopted Environmental Plans and Goals

The air quality classification for the immediate area is "Unclassifiable or Better Than National Standards" (40 CFR Part 81.327) for all pollutants. The city of Butte and surrounding area are classified as non-attainment for PM_{10} with the closest boundary approximately 13 miles to the east of the facility. The closest PSD Class I area would be the Anaconda-Pintler Wilderness located approximately 15 miles southwest of the facility.

The project would be located within the Anaconda Regional Water, Waste, and Soils Operable Unit, RDU 6 - South Uplands Unit of the Anaconda Smelter National Priorities List (NPL) Site (Anaconda Superfund site). RDU 6 covers approximately 300 square miles in the southern Deer Lodge Valley and surrounding foothills.

This permit action did not require additional modeling; however, the proposed DGGS facility would locate outside of the nonattainment area and would result in only minor impacts because the PM emissions from the facility have been previously modeled to demonstrate that the facility would not have a significant impact on the adjacent PM_{10} nonattainment area. The modeling inputs were based on the "worst case" PM emissions from the facility.

The Department is unaware of any other locally adopted environmental plans and goals that would be affected by the permit modification, or the other portions of the project, as identified at the beginning of this EA. In addition, NWE has been proactive with local and state agencies to minimize impacts. Therefore the Department believes there would be minor impacts to locally adopted environmental plans and goals as a result of this permit modification.

L. Cumulative and Secondary Impacts

Overall, the cumulative and secondary impacts from this project on the social and economic aspects of the human environment would be minor because few employment opportunities may result, state and local taxes would be generated from the facility but little change would result from the permit modification. The DGGS facility could sell power to other residents and industries in Montana. Overall, the NWE project would result in additional jobs for the area. As described in Section 8.G of this EA, the facility would employ approximately 11 full-time people. Therefore, the permit action would result in few cumulative or secondary impacts.

Recommendation: An Environmental Impact Statement (EIS) is not required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: All potential effects resulting from construction and operation of the proposed facility are minor, therefore, an EIS is not required. In addition, the source would be applying the Best Available Control Technology and the analysis indicates compliance with all applicable air quality rules and regulations.

Other groups or agencies contacted or which may have overlapping jurisdiction: Department of Environmental Quality – Permitting and Compliance Division (Air Resources Management Bureau); Previously the Department contacted: Public Service Commission (PSC), Montana Natural Heritage Program; and State Historic Preservation Office (Montana Historical Society).

Individuals or groups contributing to this EA: Department of Environmental Quality (Air Resources Management Bureau and Water Quality Bureau) Montana Natural Heritage Program, State Historic Preservation Office (Montana Historical Society) and Bison Engineering.

EA Prepared By: Jenny O'Mara
Date: February 8, 2012