Montana Department of
ENVIRONMENTAL QUALITY
Brian Schweitzer, Governor
P. O. Box 200901 Helena, MT 59620-0901 (406) 444-2544 Website: www.deq.mt.gov

August 7, 2009

Mr. Frank Giacalone, President
Montgomery Great Falls Energy Partners, LP
403 Corporate Woods
Magnolia, Texas 77354

Dear Mr. Giacalone:

Montana Air Quality Permit #3154-06 is deemed final as of August 7, 2009, by the Department of Environmental Quality (Department). This permit is for the Montgomery Great Falls Energy Partners, LP – Great Falls Energy Center. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

Vickie Walsh
Air Permitting Program Supervisor
Air Resources Management Bureau
(406) 444-9741

Paul Skubinna
Environmental Engineer
Air Resources Management Bureau
(406) 444-6711

VW:PS
Enclosure

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

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Montgomery Great Falls Energy Partners LP

Montana Air Quality Permit Number: 3154-06

Preliminary Determination Issued: June 17, 2009
Department Decision Issued: July 22, 2009
Permit Final: August 7, 2009

1. *Legal Description of Site*: Section 30, Township 21 North, Range 4 East, in Cascade County, Montana

2. *Description of Project*: Montgomery Great Falls Energy Partners LP (Montgomery) proposed to construct and operate a 390 megawatt (MW) natural gas-fired electrical power generation facility. Currently Montgomery is authorized under MAQP #3154-05 to construct and operate two simple cycle gas turbines and ancillary equipment. Each turbine is rated at 80 MW. Construction at the facility has not yet begun. Within 2 years of construction, Montgomery is required to add additional equipment to convert the two simple cycle gas turbines into combined cycle gas turbines, for a total power production 262 MW. On May 8, 2009, the Department received a complete application from Montgomery to modify MAQP #3154-05. The application proposed addition of two Rolls-Royce Trent 60 simple cycle combustion turbines for peaking operation, and other ancillary emitting units including building heaters, emergency generator and diesel fuel storage tank.

3. *Objectives of Project*: Adding the two Rolls-Royce Trent 60 simple cycle combustion turbines would allow for the Montgomery facility to provide peaking power to the electrical grid. The addition of the ancillary emitting units would support the operation of the proposed and previously permitted units.

4. *Alternatives Considered*: In addition to the proposed action, the Department also considered the "no-action" alternative. The "no-action" alternative would deny 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 Montgomery 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 BACT analysis, would be included in MAQP #3154-06.

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 are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do 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.*

		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 Resources			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

No additional impacts to terrestrial and aquatic life habitats would result from on-site construction authorized by this permitting action. Construction of the new turbines and ancillary facilities are within the footprint of the area previously analyzed for construction impacts. Similarly the proposed project would not result in discharges of waste to local terrestrial or aquatic habitats.

Minor impacts to local aquatic and terrestrial habitats would result due to the proposed increase in air pollutant emissions which would result in an increase of deposition. Impacts would be minor because ambient air quality analysis indicated none of the air quality increments or standards would be exceeded. The increments and standard are designed to mitigate deterioration of air quality such that it would result in adverse impacts to habitats. Therefore, the increased amount to deposition resulting from the project would be minor.

Overall, the impacts from the proposed action to terrestrial and aquatic life and habitats would be minor.

B. Water Quality, Quantity and Distribution

The proposed action would not result in impacts to water quality in the area. No direct discharge of process wastewater is proposed from the facility. Water quality impacts resulting from air pollutant emission deposition would be negligible.

The required air quality emissions controls include water injection. Water requirement for each of the proposed turbines is approximately 65 gallons per minute. All water for the facility would be obtained from the Great Falls municipal water supply, and all spent water would be discharged to the Great Falls city sewer. Therefore, a minor increase in demand on the city water and wastewater utilities would occur that may have a minor effect on the quantity and distribution of water resources in the area. Overall impacts to water quality, quantity and distribution would be minor.

C. Geology and Soil Quality, Stability and Moisture

Impacts to soil quality, stability and moisture content would be minor. Construction of the proposed turbines and ancillary emitting units would impact a relatively small portion of an area already analyzed for environmental impact due to industrial development. Construction activities for footings, foundations, general site grading and earthwork would disturb soil and potentially disturb the geology of the area which would in turn influence moisture content. However, proper general construction practices would mitigate short term and permanent adverse affects of construction activities. The relatively permanent existence of structures on the site may influence moisture content of underlying soils and geology but impacts would be minor.

D. Vegetation Cover, Quantity, and Quality

The proposed project would result in minor impacts to vegetative cover in the immediate area of the proposed facility. The main physical disturbance of the area would be during to construction of the facility; however, the 30-acre area designated for construction purposes would be impacted during the construction and/or operation of the proposed facility. Because of the agricultural history of this parcel and the disturbances that come from annual agricultural practices, the development of the property would not be disproportionately significant due to the proposed change in use.

The utility corridor includes a small area of new disturbances. These areas would experience temporary impacts during the installation of utilities. After installation, disturbed areas would then be restored to pre-project conditions with grading and seeding. Construction impacts would be mitigated by minimizing the area disturbed and use of recommended best management practices during construction.

Establishment of the vegetation would be conducted in accordance with storm water pollution prevention plan requirements which would limit the timeframe that the soils area exposed. Clearing of vegetation/trees would be the minimum necessary to accomplish the proposed activity.

Diesel would be stored on-site as a backup fuel. Although a diesel spill has the potential to cause harm to plant species, the facility would implement a SPCC plan, as required by the EPA regulations that would limit the likelihood of a spill occurring and limit the consequence of a spill.

E. Aesthetics

Overall the proposed facility would alter the natural landscape from a rural, agricultural setting to a more industrial environment. However, the project site is located in an agricultural environment that includes existing industrial and commercial land uses in the surrounding viewshed. Several industrial structures and commercial facilities are located within five miles of the proposed facility. A malting plant is located less than a half a mile away and has a taller profile than the simple cycle combustion turbines. The impacts to the aesthetics because of the size of the structures proposed for the facility would be relatively small. The impacts to the viewshed were assessed from recreational locations and locations in the human environment near the project site. The facility would be negligibly visible from gathering places along the Missouri River. The Montgomery facility would be visible from Highway 87, which is adjacent to the site and may be partially visible from the Lewis and Clark Interpretive Center approximately 1.8 miles from the proposed facility. Giant Springs Heritage State Park, approximately 1.9 miles from the facility, would also have partial visibility. The proposed

action would have minor impacts to the viewshed because the proposed structures and stacks would be shorter than the stacks that have already been analyzed and permitted for this industrial facility.

Sound levels are measured in units called decibels (dB). Because the human ear does not respond equally to all frequencies (or pitches) measured, sound levels are often adjusted or weighted to correspond to the frequency response of human hearing and the human perception of loudness. The weighted sound level is expressed in units called A-weighted decibels (dBA) and is measured with a calibrated sound level meter. Sound levels that correlate with the human perception are also expressed with the descriptor L_{eq}, which is defined as energy-equivalent sound level.

During the construction phase of the project, noise from on-site construction equipment and construction activities, would add to the noise environment in the immediate area. The driving and operation of construction equipment would also generate ground vibrations. The vibrations would not be of a sufficient magnitude to affect normal activities of occupants or visitors to the project site.

Construction activities would be temporary in nature and would occur during normal daytime working hours and potentially outside of normal working hours if an accelerated schedule is preferred. Noise would also be generated during the construction phase by increased truck traffic on area roadways associated with transport of heavy materials and equipment. The noise increase and vibrations from construction activities would be of short duration. Equipment operating at the project site would conform to contractual specifications requiring the contractor to comply with local noise control rules, regulations, and ordinances.

The operation of the two proposed combustion turbines at the facility is anticipated to result in additional noise for the surrounding area. The sound level at the Trent 60 sources are estimated to be approximately 85 dB, which is the same as the already permitted larger turbines and thus would cause minor impacts to aesthetics from noise.

To evaluate cumulative and secondary impacts caused by the increase in noise levels, available sound level information for the proposed combustion turbines provided by Cullum Detuners Limited were combined with already permitted equipment at the facility, and the calculated noise levels at various points along the property boundaries. Calculated noise levels were compared to regulatory standards to identify a potential for adverse impact.

The reported noise levels contributed from each of the four proposed combustion turbines and the cooling tower were used. Since the emergency generator and fire pump would operate during emergency situations, they were not included in the noise level calculations. Additional noise sources were not used since they are considered insignificant for this study. Distances from the closest side or corner of the noise emitting units to the property line were also measured. Because of the potential variables associated with the project (e.g., building materials of construction, ground surface characteristics, etc.) and the surrounding area, potential reflection and attenuation by buildings and attenuation by ground cover were ignored.

Standard noise attenuation formulas for point sources were used as the basis to calculate predicted noise levels at the property boundaries. The results vary from 39 dBA at the southeast corner of the property to 53 dBA along the northern property line close to the northern simple cycle combustion turbine (EU5). The calculated noise results are provided in following table.

Location	Total Sound Level at Receptor (dBA)
Northeast Corner	44
North Side Closest to EU5	53
Northwest Corner	47
West Side Closest to EU1	45
Southwest Corner	39
South side Closest to EU1 and EU2	45
South side Closest to EU4	44
Southeast Corner	41
East Side Closest to EU4	45
East Side Closese to EU5 and EU6	45

Specific noise regulations that would apply to the facility are not readily apparent because facility is several miles from Great Falls in a largely undeveloped or rural area with another industrial operation, farm land, and the distance to the nearest current residence is approximately ½ mile away. For comparison purposes, predicted noise levels were compared to City of Great Falls Code to evaluate possible noise standards for the facility. Although the facility may not be in the city limits at this time, the standards may apply as the city expands. City Code Title 8, Chapter 56, Section 40 Noise [8.56.040] has a table of maximum allowable noise levels (Table I Limitations for structures and open spaces) which is reproduced below:

Districts	Time of Day	
	8 a.m. to 8 p.m.	8 p.m. to 8 a.m.
Residential	55 dBA	50 dBA
Light commercial	65 dBA	60 dBA
Heavy commercial	70 dBA	65 dBA
Industrial	80 dBA	75 dBA

dBA = decibels on an "A-weighted" scale

The Great Falls noise standards require noise to be measured at a distance of twenty-five feet from the source or at the boundary of the lot, whichever is the greater distance, which is consistent with the provided calculated noise levels.

The calculations show one predicted noise level of 53 dBA exceeds the night-time residential standard of 50 dBA. The location of this exceedence is on the north side of the property. The remaining calculated noise levels were below 50 dBA. Each of the calculated noise levels are below the light and heavy commercial and industrial noise level limitations indicating that a noise impact would not exist for industrial and commercial areas.

Although one calculated noise level exceeded the night-time residential standard, the area is not platted for residential development. Additionally, it is unlikely that the area north of the facility would be developed as residential since industrial and residential developments are typically buffered with commercial developments or an undeveloped buffer area is left in place.

F. Air Quality

Potential impacts to ambient air quality have been evaluated for the proposed project, see Section VI of the Permit Analysis. In summary based on the dispersion characteristic of the area, the proposed increases in air pollutant emission would not violate any air quality standard or increment. The standards and increments have been set to protect human health and mitigate deterioration of the air quality and the environment. See Section VI of the Permit Analysis.

G. Unique Endangered, Fragile, or Limited Environmental Resources

Previous environmental analysis for this project identified two species of concern within a one mile buffer of the project site. The Entosthodon Moss (*Entosthodon rubiginosus*) and American Funaria Moss (*Funaria americana*). For this permitting action different species of concern were identified. The known range of the Burrowing Owl (*Athene cunicularia*) and Swainson's Hawk (*Buteo swainsoni*), as well as, occurrences of the Little Indian Breadroot (*Psoralea hypogaea*) have been reported within one mile of the project site.

The Burrowing Owl is uncommon globally but not vulnerable, while in Montana it is at risk of extirpation possibly because of decline in breeding population or breeding habitat. The Swainson's Hawk is common and widespread globally; however, locally it is potentially at risk because of limited or potentially declining numbers in breeding population or habitat in some areas while abundant in others. The Little Indian Breadroot is common widespread and abundant globally and infraspecific taxon are uncommon but not rare globally. Locally the Little Indian Breadroot is at risk because of very limited and potentially declining numbers, extent and/or habitat vulnerable to extirpation in some areas of the state while abundant in other portions of the state.

Impacts to these fauna would be minor because the project area does not overlap with known occurrences of these identified species' of concern range. The project area would be included in the known occurrence range of the Little Indian Breadroot; however, impacts to this flora would be minor because of the relatively small area of project within the entire local range of this flora. Overall impacts to unique endangered, vulnerable and limited environmental resource would be minor.

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

The proposed simple cycle combustion turbines would require natural gas and diesel for combustion fuel as well as water for NO_x control (i.e., water injection). Therefore, the project would require a supply of natural gas, diesel and water. Water consumed would be sourced from the City of Great Falls and is therefore presumed to be within its existing water availability and capacity, resulting in minor impacts on water demand.

The impacts to the energy resource from this facility would be minor because the facility would consume relatively small amounts of natural gas and smaller amounts of diesel fuel in comparison to the natural gas consumed nationally, and the facility would produce relatively small amounts of electrical power in comparison to the electrical power that is produced nationally. Furthermore, in comparison to other recently permitted similar sources in the nation, the natural gas consumption and electrical production are again, minor.

I. Historical and Archaeological Sites

The Department 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 no previously recorded cultural properties are within the project site. Because of the fact that agricultural activities have occurred in the area, the likelihood of finding undiscovered or unrecorded historical properties is negligible.

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. The modeling analysis indicates that the cumulative emissions from Montgomery and other industrial facilities would not violate the MAAQS, NAAQS or Class II PSD increments.

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

		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 ECONOMIC AND SOCIAL EFFECTS: The following comments have been prepared by the Department.

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

The proposed 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 proposed turbines and ancillary equipment would be located with the footprint of the already analyzed and permitted industrial facility. The larger area surrounding the proposed site would remain agricultural.

C. Local and State Tax Base and Tax Revenue

The proposed peaking turbines and ancillary facilities are not expected to result in creation of significant new tax base. Minor amounts of additional property tax may be required as the facilities property value would increase due to the further development of the site. Similarly, the peaking turbines will result in generation of additional power available; however, peak power is frequently unregulated and not subject to many state and local taxes. The number of permanent employees at the plant as a result of the proposed action is also expected to be nominal resulting in minor impacts to income tax base. Over-all the proposed action would results in nominal increase in state and local tax revenue.

Impacts the proposed action would have on local property values in the area would also be minor. The proposed turbines would be located within the footprint of a previously permitted industrial facility that is approximately ½ mile (2640 feet) from the nearest residence and would not be aesthetically out of character given other industrial activity and facilities in the area. Other factors that are traditionally associated with a decrease in property values such as odors, fumes, or significant increases in traffic, dust, vibration, or noise would not be present at this location. An appraisal of individual tracts is beyond the scope of environmental analysis required for the proposed action.

D. Agricultural or Industrial Production

The impacts to agricultural and industrial production in the area from this facility would be negligible because the proposed turbines and ancillary equipment would be located within the footprint of previously analyzed industrial facility; therefore no additional agricultural production losses would occur from the proposed action. The impact from the air emissions on the land would be small, and the amount of additional electricity produced by the proposed turbines would be to accommodate peak and would be relatively small to that produced to satisfy base-load.

E. Human Health

As described in Section 7.F of the EA, the impacts from this facility, including the current proposed 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 modeled impacts from this facility, taking into account other dispersion characteristics (wind speed, wind direction, atmospheric stability, stack height, stack temperature, etc.), are below the MAAQS, NAAQS, and PSD Increments. The air quality permit for this facility incorporates conditions to ensure that the facility would be operated in compliance with all applicable rules and standards. These rules and standards are designed to be protective of human health.

Besides the criteria pollutants, the impacts from HAPs would also be greatly minimized by the dispersion characteristics of the facility and the area (wind speed, wind direction, atmospheric stability, stack temperature, facility emissions, etc.). Impacts from other common activities (such as fueling your vehicle for example) would have a greater impact on human health for HAPs because of the concentrations at the point of exposure.

F. Access to and Quality of Recreational and Wilderness Activities

The facility would result in a minor impact on the access to and quality of recreational and wilderness activities because

- The air emissions from the facility are relatively small and would disperse before impacting the recreational areas
- The recreational activities in the area are approximately 1½ to 2 miles away
- Most of the nearby recreational activities are upwind of the predominant wind pattern.

Furthermore, the proposed turbines and ancillary equipment will be located on private land owned by Montgomery and within the footprint of the land area previously analyzed for recreation impacts. The property will continue to be private. No significant recreational or wilderness activities exist within the Montgomery property boundaries.

Recreational activities exist in the area surrounding the proposed site location. The closest recreational opportunities appear to be:

- Anaconda Hills Golf Course (closest point approximately 0.7 miles)
- Rivers Edge Trail (closest point approximately 1.4 miles)
- Giant Springs Heritage State Park (approximately 1.9 miles)
- Missouri River (closest point approximately 1.4 miles)
- North Shore Conservation Easement Lands
- Black Eagle Dam
- Rainbow Dam
- Cochrane Dam
- Ryan Dam
- Morony Dam

Based on the modeling analysis performed for the proposed action the impacts to air quality at recreational locations in the area would and Class I airsheds in the region would be minor.

G. Quantity and Distribution of Employment

A limited number of employment opportunities in additional to those previously analyzed may result from the proposed action. Therefore, impacts to quantity and distribution of employment from the proposed action would be minor.

H. Distribution of Population

The Montgomery facility may result in minor impacts to the population distribution. No additional employment opportunities in additional to those previously analyzed would result from the proposed action. Therefore, impacts to quantity and distribution of employment from the proposed action would be minor. Any employment opportunities that do occur from the proposed action are expected to be filled by local workforce; therefore, limited immigration to the Great Falls would occur in response to the proposed action.

I. Demands for Government Services

Minor increases may occur in traffic on existing roads in the area while the proposed facilities are operating. However, no significant increase in traffic count is expected from the proposed action. Similarly water for the proposed turbines would be obtained from the Great Falls municipal water supply, and all wastewater would be discharged to the Great Falls city sewer. However, demands on water and wastewater services are relatively small compared to the overall flows accommodated by the City system. Over-all demands on utilities and roadways from the proposed action would be minor.

The acquisition of the appropriate air quality permit modifications and other applicable permits for the proposed would be minor. Compliance verification with those permits would not require significant additional government service in addition to those required by the already permitted facility.

J. Industrial and Commercial Activity

The proposed action would result in a minor impact/increase in industrial and commercial activity. As mentioned previously, the area surrounding the Montgomery facility is agricultural, but other industrial and commercial facilities are located nearby. The Montana Refining Company is located approximately 2 miles away, Montana Ethanol Project, LLC (formerly Agri-Technology Montana, LLC) proposed to locate at a site approximately 3.8 miles away, Malmstrom Air Force Base is located approximately 4 miles away, numerous radio/television towers are nearby, and a bus "yard" is adjacent to the facility. A malting plant is located within a half a mile southeast of the Montgomery Energy Facility. The proposed action would potentially increase electrical power availability and help satisfy peak demand in the Great Falls area that may attract additional industrial or commercial activity to the area.

K. Locally Adopted Environmental Plans and Goals

The City of Great Falls contains an area that was previously classified as nonattainment area for CO along 10th Avenue South. However, the area has been redesignated as attainment. Furthermore, the proposed facility is outside of the former nonattainment area and the prevailing wind pattern in the area would carry the emissions from the facility to the north and east of the plant, away from the nonattainment area.

The Department is unaware of any other locally adopted environmental plans and goals that would be affected by the facility or the other portions of the project as identified at the beginning of this EA.

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 limited full-time employment opportunities would result, limited construction related employment opportunities would be available, and the proposed project would increase availability of peak time power to other residents and industries in Montana.

Recommendation: No Environmental Impact Statement (EIS) is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the construction and operation of two peaking turbines and ancillary equipment. MAQP #3154-06 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Resources Management Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

EA prepared by: P. Skubinna
Date: June 12, 2009