



Montana Department of  
**ENVIRONMENTAL QUALITY**

Brian Schweitzer, Governor

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PRELIMINARY DETERMINATION  
ON PERMIT APPLICATION

Date of Mailing: April 10, 2009

Name of Applicant: Hexion Specialty Chemicals, Inc.

Source: Formaldehyde and Thermoset Production Facility

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 2836-05.

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 May 11, 2009. 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  
Air Permitting Program Supervisor  
Air Resources Management Bureau  
(406) 444-9741

Jenny O'Mara  
Environmental Engineer  
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VW:JO

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

**DRAFT ENVIRONMENTAL ASSESSMENT (EA)**

*Issued To:* Hexion Specialty Chemicals, Inc.

*Montana Air Quality Permit Number:* 2836-05

*Preliminary Determination Issued:* 4/10/09

*Department Decision Issued:*

*Permit Final:*

1. *Legal Description of Site:* Hexion operates a formaldehyde and thermoset production facility located at 3670 Grant Creek Road in Missoula, Montana. The legal description is the West ½ of Section 8, Township 13 North, Range 19 West in Missoula County. A list of equipment at the facility is contained in the permit analysis of MAQP #2836-05.
2. *Description of Project:* On December 30, 2008, the Department received a permit application from Hexion to expand and modify the existing formaldehyde production unit. The Department requested additional information on January 29, 2009; and the additional information was received on March 2, 2009. This permit modification and expansion project would include: an increase in the methanol and formaldehyde storage tank throughputs; modification to production and storage permit limits; replacement of the existing distillation column; replacement of two positive displacement air blowers with a single but larger centrifugal fan; modification of pumps, lines and valves to support additional flows; change the service of the existing 37% formaldehyde storage tank to a PF washwater tank; installation of a new 22,495 gallon storage tank to replace the 37% formaldehyde storage tank; clarification of production rate limits for UFC and UF resins; and addition of permit throughput limits for resin drying pad, Wastewater pits, distillate storage, PF washwater tank, urea weigh scale, and cooling tower.  
  
The permit will also be updated to reflect the current permit language and rule references used by the Department.
3. *Objectives of Project:* Hexion facility manufactures blends of formaldehyde and thermoset resins. The main purpose of the current permit action is to expand the existing formaldehyde production.
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 Hexion 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 #2836-05.

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

Any impacts resulting from the proposed project to terrestrial and aquatic life and habitats would be minor because all proposed activities would take place within the Hexion property boundary, an existing industrial site. Further, minor impact to the surrounding area from the air emissions (see Section VI of the permit analysis) would be realized due to dispersion of pollutants.

Terrestrials (such as deer, antelope, rodents, and insects) might frequent the area. However because other industrial sources are located near this facility, terrestrials that routinely inhabit the area are accustomed to the industrial characteristics of the site. Because the facility is an existing industrial site, and the modifications are minor there would be little, if any, impacts to terrestrial and aquatic life and habits.

B. Water Quality, Quantity and Distribution

Any impacts resulting from the proposed project to water quality, quantity, and distribution would be minor, if any, because all proposed activities would take place within the defined property boundary, an existing industrial site. This project would add an additional storage tank to the existing operation which would result in minor impacts to water quality, quantity and distribution. Once construction/installation of the tank is complete, the overall impacts to water quality, quantity, and distribution from the proposed permit modifications, resulting in air emissions and deposition of air emissions would be minor.

C. Geology and Soil Quality, Stability and Moisture

Any impacts resulting from the proposed project to geology and soil quality, stability, and moisture would be minor because all proposed activities with respect to permit limits would take place within the defined Hexion property boundary, an existing industrial site. Hexion owns approximately 22 acres and has developed 5 acres. Therefore, approximately 17 acres would remain as open space. The issuance of this permit would not result in construction of any structures outside the area already disturbed; therefore, there would be minor impacts on the soil quality, stability, moisture, or geology.

D. Vegetation Cover, Quantity, and Quality

The operation would take place within Hexion's existing industrial site and little new construction or ground disturbance to the area would be required. Any modifications to the existing facility would take place in an area that has previously been disturbed. The Department contacted Montana Natural Heritage Program (MNHP) in an effort to determine if there are any species of concern in or near this area. MNHP noted that there are no species of concern in the area. Emissions from the operation could affect vegetation cover, quantity, and quality in the project area. However, pollutants would be widely dispersed before settling upon vegetation and surrounding soils. The Department believes that any resulting impacts from the emissions during construction/installation and operation of the tank would be minor.

E. Aesthetics

Hexion is an existing industrial operation located in the City of Missoula in a predominantly commercial/industrial area. The Roseburg Forest Products – Missoula Mill is located south of the existing facility as well as other commercial/industrial enterprises. Visible emissions from the source would be limited to 20% opacity, and noise generated by the operation would be minor due to the nature of the business. Modifications to the existing facility would take place in an area that has previously been disturbed and already has noise associated with its operation. The increase in resin production may increase activity on the site. However, the Department believes any additional impacts to aesthetics due to the operation of the tank and additional throughput would be minor.

F. Air Quality

The air quality impacts from Hexion's expansion and improvement project would be minor. The proposed project would result in a small emission increase in various air pollutants, the vast majority of which would be methanol, formaldehyde and phenol, regulated VOCs and HAPs. However, Hexion's potential to emit for the entire facility is less than 10 tons per year of HAPs.

Hexion's Missoula facility is not subject to Title V Operating Permit requirements because federally enforceable limitations have been established to limit the sources' PTE below the major source threshold. MAQP #2836-05 would include conditions limiting the opacity.

The Department believes that modifications to the facility, operating under the limits and conditions included in this permit would not cause or contribute to a violation of any applicable ambient air quality standard. The effects on air quality would be minor because the project would only increase the potential emissions by approximately 3.12 tpy of formaldehyde and 1.68 tpy of methanol. Therefore, the Department determined that ambient air impacts from this permitting action would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

In an effort to identify any unique endangered, fragile, or limited environmental resources in the area, the Department contacted the MNHP. Search results concluded there are 8 species of concern in the area. The area in this case is defined by the township and range of the proposed site, with an additional one-mile buffer. The species of special concern identified by MNHP include the *Swainson's Hawk*, *Flammulated Owl*, *Westslope Cutthroat Trout*, *Bull Trout*, *Fringed Myotis*, *Gray Wolf*, *Western Skink*, and *A Subterranean Amphipod*.

The Hexion site has historically been used for industrial purposes. Any changes in operation associated with the proposed modification and increase in throughput would take place within the existing Hexion property boundary. Because industrial operations have been ongoing within the existing property boundary for an extended period of time and potential permitted emissions from Hexion show compliance with all applicable air quality standards, it is unlikely that any of these species of special concern would be affected by the proposed project. Overall, any impacts to any unique endangered, fragile, or limited environmental resources would be minor.

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

The operation would result in minor demands on the environmental resource of water and air, as discussed in Sections 7.B and 7.F of this EA. Because the operation is an existing operation and the current permit action would result in a small amount of additional water and energy consumption, the impacts would be minor. Overall, any impacts to the demands on the environmental resources of water, air, and energy from Hexion's proposed permit modifications would be minor.

I. Historical and Archaeological Sites

In an effort to identify any historical and archaeological sites near the proposed project area, the Department contacted the Montana Historical Society, State Historic Preservation Office (SHPO). According to SHPO records, there are no previously recorded historic or archaeological sites within the project area. However, SHPO has reported that the absence of recorded cultural/historical properties in the search locale may be due to a lack of previous inventory. Due to the potential for minor additional ground disturbance from the proposed project in an existing industrialize area and the low likelihood that cultural resources exist in the area, the Department determined that this current permit action would not impact any cultural or historic sites.

J. Cumulative and Secondary Impacts

Overall, any cumulative and secondary impacts from the proposed permit modification on the physical and biological resources of the human environment in the immediate area would be minor due to the fact that the predominant use of the surrounding area would not change as a result of the proposed project. The Department believes that this facility would operate in compliance with all applicable rules and regulations as outlined in MAQP #2836-05.

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

The predominant use of the surrounding area is industrial/commercial and would not change as a result of the project. The Department believes the operation would have minor effects on any native or traditional lifestyles or communities (social structures or mores) of the proposed area of operation because the facility is an existing industrial site, and the permit modifications are minor.

B. Cultural Uniqueness and Diversity

The cultural uniqueness and diversity of this area would not be impacted by Hexion. The predominant use of the surrounding area would remain as industrial/commercial. Therefore, the cultural uniqueness and diversity of the area would not be affected.

C. Local and State Tax Base and Tax Revenue

There would be no additional employees required as a result of this permit action. Hexion would remain responsible for all appropriate state and county taxes imposed upon the business’ operation. In addition, Hexion employees would continue to contribute to the overall income base of the area. The Department believes that this project would have minor additional impacts to the local and state tax base and tax revenue.

D. Agricultural or Industrial Production

Hexion would have a minor impact on local industrial production. Hexion would operate in an existing industrial building(s) located in an area that is predominantly industrial/commercial. There would not be a change in agricultural production and minor changes to local industrial production

due to Hexion's increase in production. Overall, changes to agricultural and industrial production in the area would be minor.

E. Human Health

The Clean Air Act established two types of NAAQS, Primary and Secondary. Primary Standards set limits to protect public health, including, but not limited to, the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary Standards are set to protect public welfare, such as unacceptable damage to crops and vegetation, buildings and property, and ecosystems. Under MAQP #2836-02, Hexion demonstrated that Hexion's operation would comply with all applicable ambient air quality standards. There may be minor effects on human health due to the small emission's increase of pollutants (primarily formaldehyde and methanol). MAQP #2836-05 incorporates conditions to ensure that the facility would operate in compliance with all applicable rules and standards, and these rules and standards are designed to protect human health. Hexion's proposed changes to operation requirements and the increase in formaldehyde production would be considered a minor. Therefore, modifications to the existing facility would result in a minor risk to human health in the surrounding area.

F. Access to and Quality of Recreational and Wilderness Activities

Because the facility would operate in an existing building located in an area that is predominantly industrial/commercial, the permit modification would not change or affect any access to, or quality of, any recreation or wilderness activities in the area.

G. Quantity and Distribution of Employment

Hexion has been in operation for several years, and the size and nature of the project would remain essentially the same as a result of this permit modification. Therefore, modifications to the existing facility would not result in an increase in employees and the Department believes this project would not impact the quantity and distribution of employment in the area.

H. Distribution of Population

Hexion is located in Missoula, Montana which has a population of approximately 64,000. The current permit action would not result in an increase in employment or change to population. Therefore, the Department believes that changes to operation requirements and the increase in formaldehyde production would not impact the distribution of population in the project area

I. Demands for Government Services

Government services would be required for acquiring the appropriate permits from government agencies. In addition, the permitted source of emissions would be subject to periodic inspections by government personnel. However, demands for additional government services would be minor.

J. Industrial and Commercial Activity

The current permit action would change various aspects of the previously permitted Hexion facility operations, specifically related to formaldehyde production and operation requirements but would not result in an overall change in facility purpose. Therefore, the proposed permit modification would not impact any industrial or commercial activity in the area beyond those impacts already realized through previous permit actions for Hexion.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans or goals in the immediate area affected by the project. Because the facility is existing, the Department believes this project would not impact or change any other environmental plans and goals.

L. Cumulative and Secondary Impacts

Overall, cumulative and secondary impacts from the proposed permit modification on the economic and social resources of the human environment in the immediate area, would be minor, due to the fact that the predominant use of the surrounding area would not change as a result of the proposed project. The Department believes that this facility would continue to operate in compliance with all applicable rules and regulations as outlined in MAQP #2836-05.

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 expansion of the formaldehyde production and changes in operation at Hexion. MAQP #2836-05 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: Jenny O'Mara

Date: March 25, 2009