

#### 4.7.4.1.2.4 Review of the Permit Application/Technical Review/ Permit Application for New Facilities/Industrial Permits/ Site-Specific Storm Water

##### **Applicability:**

Describes Technical Review Procedure of New Permit Applications for Site-Specific, Industrial Storm water Permits

##### **Content:**

##### **Site-Specific Storm water Permitting at Industrial Sites**

Missouri has promulgated its own storm water regulations under the authority of the Missouri Clean Water Law. They became effective October 1, 1992 matching EPA's application date. Agricultural lands, construction sites less than 1 acre, landfills with DNR closure approval, road maintenance and utility trench sites of certain size are exempt from storm water permitting requirements.

The requirement to obtain a state operating permit (SOP) that covers storm water is based on the use of Standard Industrial Classification (SIC) codes. An industry can determine their primary SIC code by consulting the manual published by the federal government. Every type of business has a four digit SIC code. For many of the following SIC codes general permits have been developed. But those for which a general permit has not been developed will need to apply for a site-specific permit using forms A and 2F. For some facilities the storm water discharge can be simply added to the existing State Operating Permit by adding outfall(s).

The first group of identified SIC codes are required to obtain a permit to discharge storm water, regardless of exposure of materials to storm water. These industries are:

<b>Industry</b>	<b>SIC Code</b>
Metal Mining	10xx
Coal Mining	12xx
Oil and Gas Extraction	13xx
Mining and Quarrying of Nonmetallic Minerals (except fuels)	14xx
Lumber and Wood Products (except furniture)	24xx
Paper and Allied Products	26xx
Chemical and Allied Products	28xx
Petroleum Refining and Related Industries	29xx
Leather Tanning and Finishing	311x
Stone, Clay, Glass, and Concrete Products	32xx
Primary Metal Industries	33xx
Fabricated Structural Metal	3441
Ship and Boat building and Repairing	373x

The second group of identified SIC codes are required to obtain a storm water permit for only those portions of the facility that are involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations, or airport deicing operations. These industrial classifications are:

<b>Industry</b>	<b>SIC Code</b>
Railroad Transportation	40xx
Local and Suburban Transit and Interurban	41xx
Highway Passenger Transportation	42xx
Motor Freight Transportation and Warehousing	
United States Postal Service	43xx
Water Transportation	44xx
Transportation by Air	45xx
Petroleum Bulk Station Terminal	

The third category of identified SIC codes may need to obtain a storm water permit only if certain activities or materials are exposed to storm water. Some of these are discharges from industrial plant yards, finished products, by-products or waste products, storage and maintenance of material handling equipment, storage areas for raw materials, etc.

<b>Industry</b>	<b>SIC Code</b>
Food and Kindred Products	20xx
Tobacco Products	21xx
Textile Mill Products	22xx
Apparel and Other Finished Products Made from Fabrics and Similar Materials	23xx
Wood Kitchen Cabinets	2434
Furniture and Fixtures	25xx
Paperboard containers and Boxes	265x
Converted Paper and Paperboard Products	267x
Printing, Publishing and Allied Industries	27xx
Drugs	283x
Paints, Varnishes, Lacquers and Enamels, and Allied Products	285x
Rubber and Miscellaneous Plastic Products	30xx
Leather and Leather Products (except 311x)	31xx

Glass Products, Made of Purchased Glass	323x
Fabricated Metal Products, Except Machinery and Transportation Equipment (except 3441)	34xx
Industrial and Commercial Machinery and Computer Equipment	35xx
Electronic and Other Electrical Equipment And Components	36xx
Transportation Equipment (except 373x)	37xx
Measuring, Analyzing and Controlling Instruments Photographic, Medical, and Optical Goods; Watches and Clocks	38xx
Miscellaneous Manufacturing Industries	39xx
Public Warehousing and Storage	4221- 4225

The following industrial types are required to apply regardless of items exposed to storm water.

1. Hazardous waste treatment, storage, or disposal facilities; however, hazardous waste generator sites that accumulate wastes on-site for less than 90 days are exempt,
2. Landfills and open dumps,
3. Recycling facilities including metal scrap yards, battery reclaimers, salvage yards and automobile junk yards; however, recycling collection centers are exempt from the regulations,
4. Steam electric power generation facilities including coal handling sites, and
5. Domestic sewage and wastewater treatment facilities with a design flow of 1.0 million gallons per day or more, and disposal areas.
6. Land application sites for all industries.

Several aspects of the storm water permitting requirements are:

1. The term 'storm water discharge associated with industrial activity' excludes storm water drained from areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots, as long as the drainage from the excluded areas is not mixed with storm water drained from the industrial activity areas.
2. The term 'storm water discharges associated with industrial activity' includes only storm water discharges from all the areas (except access roads and rail lines) where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water.
3. Storm water discharges associated with industrial activity discharged through municipal separate storm sewers to waters of the United States are required to obtain state operating permit coverage because this water does not go to a treatment plant, it simply goes to the nearest creek.
4. Discharges to municipal sanitary systems, including combined sewer systems (systems designed to convey municipal sanitary sewage and storm water) are not required to

obtain NPDES permit coverage. However, these discharges may be subject to pretreatment requirements, including requirements implemented by permits issued by the operator of the municipal treatment plant.

The requirements for individual permit application for most types of discharges composed of storm water associated with industrial activity are incorporated into Form A and Form 2F.

Form 2F (EPA Form 3510-2F) contains information which can be used to evaluate the pollution potential of storm water discharges associated with industrial activity, including:

- A map showing site drainage;
- An estimate of the area of impervious surfaces and the total area drained by each outfall;
- A narrative description of material management practices and control measures;
- A statement that separate storm water outfalls have been tested or evaluated for non-storm water discharges;
- Existing information regarding significant leaks or spills of toxic or hazardous pollutants at the facility that have taken place within the three years prior to the submittal of the application;
- Sampling data for specified parameters; and
- A description of the likely sources of pollutants from the site and a prediction of the pollutants which are likely to be present in the storm water.

Form 2F requires that a site drainage map be attached to the application. The site drainage map must show either topography or a delineation of the drainage area served by each outfall which discharges storm water associated with industrial activity if a topographic base map is not used.

The delineation of the drainage area for each outfall that discharges storm water associated with industrial activity can be based on site observations that identify drainage patterns. Drainage patterns should be shown on the site drainage map so that runoff from each drainage area drains to a separate outfall.

The site drainage map must show the location (and size – approximate for earthen structures) of all drainage conveyances or natural channels that convey or drain storm water off the applicant's property. The map must indicate whether the drainage system receiving the drainage is a natural water body, part of a municipal or non-municipal drainage system, or other system as applicable.

The following information must be provided and recorded on the map where appropriate:

- Paved areas and buildings at the facility
- Past and present outdoor areas used for storage or disposal of significant materials
- Hazardous waste treatment, storage or disposal facilities, or accumulation areas
- Material loading and access areas (e.g., loading docks and main truck routes on the facility property)
- Areas where pesticides, herbicides, soil conditioners, and fertilizers are applied
- Structural control measures to reduce pollutants in storm water runoff
- Surface water bodies which receive storm water discharges from the facility

During the preparation of a site drainage map emphasis should be placed on the identification of all inflow sources to ensure that inappropriate sources of non-storm water entry are not present.

The map should identify points of entry to the facility site storm water drain system, including catch basins, floor drains, and roof leaders.

The site drainage map required in Form 2F should show the location and an identifying number or name for each storm water outfall at the facility.

### **Identification of Outfalls to be Monitored**

Form 2F requires that applicants provide quantitative data for samples of storm water discharges associated with industrial activity. If a facility discharges storm water associated with industrial activity to a municipal separate storm sewer, then the facility should sample the storm water from the site prior to discharging to the municipal separate storm sewer. Storm runoff from areas located on plant lands separate from the plant's industrial activities, such as administrative building roofs and accompanying parking lots, are not defined as storm water associated with industrial activity. Therefore, they do not need to be monitored unless the runoff is combined with storm water associated with industrial activity. When an applicant has two or more outfalls with substantially identical effluents, the department may allow the applicant to test only one outfall and report that the quantitative data obtained from that outfall also apply to substantially identical outfalls.

### **Estimates of Discharge Flow Rates and Volumes**

Form 2F requires applicants to provide quantitative data based on samples collected during storm event(s). One set of parameters that must be provided for such storm event(s) are flow estimates or flow measurements, and an estimate of the total volume of the discharge. The method of flow estimation or measurement must be described in the application.

Applicants need only provide rough estimates of flows in Form 2F. The following section discusses methods for obtaining the required information.

Runoff flow rates and volumes can be estimated by using the total rainfall amount for the storm event and estimated runoff coefficients for the facility. Runoff coefficients represent the fraction of total rainfall that will be transmitted as runoff from the facility. As such, the coefficients reflect the ground surface or cover material. To estimate runoff volume and rates, it can be assumed that roofs and paved areas have runoff coefficient of 90%.

### **Legal References:**

*Code of State Regulations:*

<a href="#"><u>10 CSR 20-6.010</u></a>	Construction and Operating Permits
<a href="#"><u>10CSR 20-6.200(1), (2), (6)</u></a>	Storm Water Regulations - (1) Storm Water Permits - General (2) Storm Water Discharge Associated with Significant Industrial Activities (6) Permit Requirements

### **Other Links:**

[Standard Industrial Code Manual](#)

[Guidance Manual for the Preparation of NPDES Permit Applications for Storm Water Discharges Associated with Industrial Activity – EPA – 505/8-91-002 April 1991](#)

[MO-780-1749 Form A](#) – Application for Construction and Operating Permit

[Form 2F](#) – EPA Application for Permit to Discharge Storm water Discharges Associated with Industrial Activity

[2.3.2.1 Categorical Industries](#)

[2.3.2.2 Primary Industries](#)

[5.3.1.3 Limitations for Categorical Industries](#)

[5.3.1.4 Limitations for Primary Industries](#)

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