

Sampling for Industrial and Mining Facilities

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NORTH DAKOTA
DEPARTMENT *of* HEALTH

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Who Needs to Sample?

- Standard Industrial Classification (SIC) Code
- Use OSHA website, https://www.osha.gov/pls/imis/sic_manual.html, to find your SIC Code
- The department may direct any facility covered by the General Mining or General Industrial permits to conduct stormwater sampling

Who Needs to Sample?

Mining General Permit

- **Asphalt Paving and Roofing Materials – SIC 2951**
- **Glass, Clay, Cement, Concrete, and Gypsum Products – SIC 3271-3275**
- **Coal Mines and Coal Mining Related Facilities – SIC 1221-1241**
- **Oil and Gas Extraction – SIC 1311, 1321, 1381-1382**
- **Non-Metallic Mineral Mining and Dressing – SIC 1411, 1422-1429, 1442, 1446 1481, 1499**

Who Needs to Sample?

Industrial General Permit

- **Wood and Paper Products** – SIC 2421, 2491, 2426, 2431-2433, 2435-2439, 2451, 2452, 2493, 2499, 2631
- **Chemical and Related Products** – SIC 2873-2879, 2812-2819, 2841-2844, 2821-2824
- **Asphalt Paving and Roofing Materials** – SIC 2952
- **Structural Clay Products Manufacturers** – SIC 3251-3259
- **Primary Metal Industries** – SIC 3312-3317, 3321-3325, 3351-3357, 3363-3369
- **Miscellaneous Metal Ores** – SIC 1094
- **Hazardous Waste Treatment, Storage and Disposal**
- **Landfills and Land Application**
- **Automobile Salvage Yards** – SIC 5015
- **Scrap Recycling Facilities** – SIC 5093
- **Steam Electric Generating Facilities**
- **Coal Pile Runoff (Stormwater Discharge from Coal Storage Piles)**
- **Air Transportation (Regional and Primary Commercial Airports and Air Force Bases)**
- **Food and Related Products** – SIC 2041-2048, 2074-2079
- **Fabricated Metal Products** – SIC 3411-3499, 3911-3915

When do you Sample?



- 1 Sample per year
- Samples must be representative of the discharge.
- Must be from a storm event that is greater than 0.1 inches.
- Or from a snowmelt event which generates runoff.

When do you Sample?

- Discharges from holding ponds or impoundments with 24 hours retention capability, sampling can be done at any time.
- Discharges without impoundments shall be taken within 30 minutes of the start of discharge
- If not practicable grab a sample ASAP and explain on the DMR why a sample could not be obtained.



Where do you Sample?

- ① Point(s) specified on your SWPPP
- ① If multiple points may be identified as identical in your SWPPP.
- ① A representative sample may be taken for identical points.

What do you need to Record?



Rain Gauge from Weathershack.com March 2015

- Date
- Duration (Hours)
- Rainfall Amount (Inches)
- Days since the last 0.1-in storm event
- Estimated size of the drainage area
- Estimated quantity of discharge

How do you Sample?

- Get Sampling Kit
- Can be obtained from your Lab
- Sampling requirements are found on the department website.



Stormwater Sample Kit from aflab.com March 2015

How do you Sample?

SAMPLING POLICIES

- Company policies
- Lab Requirements
 - Test only on certain days for some parameters.
 - Sample bottles may be pre-acidified
- State procedure

STATE CERTIFIED LABS

- **NDDoH Lab** – PO Box 5520
Bismarck, ND 58506
- **MVTL** – 2616 E Broadway
Ave, Bismarck, ND 58501
- **Astro-Chem** – 4102 2nd Ave
W, Williston, ND 58801

How Do you Sample?

NDDoH Standard Sampling Procedure

- Rinse sample bucket/cup 3X
- Rinse sample container 3X
 - Not rinsing pre-acidified or e coli container
- Take the sample
- Add any required additives
- Close samples and seal if applicable
- Mark samples
 - Name or initials
 - Time and timezone
 - Location
- Place into cooler

What do you do with the Sample?

North Dakota Department of Health Sample Identification Record Sheet Division of Laboratory Services—Chemistry Ship to: 2635 E Main Ave, Bismarck ND 58501 Telephone: 701.328.6140 Fax: 701.328.6280 NDPDES Wastewater Program		A. For Laboratory/Program Use Only Lab ID: _____ Preservation: _____ Temperature: _____ Yes <input type="checkbox"/> _____ Initials: _____													
B. 1 Account#	10 Project Code:	11 Project Name:	19 Matrix: <input type="checkbox"/> Water <input type="checkbox"/> Soil												
C. NDPDES Wastewater Sample Classification Code (Select one) <input type="checkbox"/> "C" for CAFO <input type="checkbox"/> "C" for Dewatering <input type="checkbox"/> "C" for Pretreatment <input type="checkbox"/> "C" for Stormwater <input type="checkbox"/> "D" for Permitted Wastewater <input type="checkbox"/> "N" Non Program <input type="checkbox"/> Unknown															
D. Customer/Sample Collection Information (Please print using a permanent marker or dark pen) Samples received without all bold items in sections D and F fully completed will be rejected and not analyzed.															
2, 3,-Customer Name:		NDPDES Facility ID/Permit Number:													
4, 5,-Customer Address:		6, 7, 8,-Customer City, State, Zip:													
14-Date Collected:	15-Time Collected: AM or PM	23, 24,-Sample Collection/Location:													
Sampler:	Phone:	27, 28,-Comments													
E. Field Measurements, Field Preservation and Related Information <table border="1"> <thead> <tr> <th>Temp</th> <th>pH</th> <th>Dissolved O₂</th> <th>Specific Conductance</th> <th>Preservation</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>				Temp	pH	Dissolved O ₂	Specific Conductance	Preservation	Comments						
Temp	pH	Dissolved O ₂	Specific Conductance	Preservation	Comments										
F. Sample Analysis. Check the box(es) to indicate the analysis needed.															
<input type="checkbox"/> Check this box if this is a resample for a previous analysis															
<input type="checkbox"/> 3	BOD₅, TSS, and pH	<input type="checkbox"/> 3180	Mercury (Hg), Total												
<input type="checkbox"/> 9505	BOD₅	<input type="checkbox"/> 184	Microbiology-Fecal Coliform												
<input type="checkbox"/> 118	TSS-Total Suspended Solids	<input type="checkbox"/> 5	Mineral Chemistry-Major Cations/Anions												
<input type="checkbox"/> 9305	pH	<input type="checkbox"/> 187	Mineral Chemistry Complete/Wastewater												
<input type="checkbox"/> 186	Microbiology-Fecal Coliform replaced with Microbiology-E. Coli	<input type="checkbox"/> 188	Mineral Chemistry Partial/Wastewater												
<input type="checkbox"/> 41		<input type="checkbox"/> 41	Nitrate-Nitrite												
<input type="checkbox"/> 189	Ammonia Total-NH₃	<input type="checkbox"/> 9595	Nitrogen Total												
<input type="checkbox"/> 1713	Aluminum Total Dissolved	<input type="checkbox"/> 183	Nutrients-NDPDES												
<input type="checkbox"/> 65	Benzene, Toluene, EBenzene, Xylene	<input type="checkbox"/> 9145	Phenols, Total												
<input type="checkbox"/> 171	CAFO Parameters	<input type="checkbox"/> 7	Trace Metals												
<input type="checkbox"/> 5217	Chloride	<input type="checkbox"/> 12	Total Kjeldahl Nitrogen TKN												
<input type="checkbox"/> 9525	COD-Chemical Oxygen Demand	<input type="checkbox"/> 9150	Oil and Grease												
<input type="checkbox"/> 35	Conductivity	<input type="checkbox"/> 13	Phosphorus P Total												
<input type="checkbox"/> 89	Cyanide-CN	<input type="checkbox"/> 132	Stormwater Group												
<input type="checkbox"/> 1226	Iron Fe	<input type="checkbox"/> 9440	Sulfate-SO ₄												
<input type="checkbox"/> 2182	Lead (Pb), Total	<input type="checkbox"/> 9835	TDS-Total Dissolved Solids Filter Residue												
<input type="checkbox"/> 1225	Manganese Mn														

- Fill out the Sample ID Sheet as specified by the lab
 - Call the lab with any questions
- Place the cooler into the box
- Place the Sample ID Sheet on top of the cooler
- Mail the package

What do you do with the sample results?

- Fill out the appropriate Discharge Monitoring Report
 - DMR's can be found on the department's website
- Mail in the signed DMR



DISCHARGE MONITORING REPORT
 NORTH DAKOTA DEPARTMENT OF HEALTH
 DIVISION OF WATER QUALITY
 SFN 19148-G11(1005)
 North Dakota Pollutant Discharge Elimination System

Baseline Parameters

Name of Facility					
Permit Number		Discharge Number		Monitoring Period	
				From:	To:

Pollutant Parameter	Quality or Concentration				Sample Type
	Event 1	Event 2	Event 3	Units	
Total Suspended Solids					Grab
Total Phosphorus					Grab
Ammonia as Nitrogen					Grab
Total Nitrates as Nitrogen					Grab
pH					Instantaneous
Oil and Grease					Visual
5-Day Biochemical Oxygen Demand					Grab
Chemical Oxygen Demand					Grab

Date of Storm Event Sampled	Duration of Storm Event (hours)	Precip. Amount (inches)	Time Since Last 0.1 in. or Greater Precip. Event (days)	Estimated Size of Drainage Area (acres)	Estimated Quantity of Runoff Discharge (gallons)
1.					
2.					
3.					

Comments:

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Typed or Printed Name/Title of Principal Executive Officer	Telephone Number
Signature of Principal Executive Officer or Authorized Agent	Signature Date

What do you do if you have exceedances?

- ⦿ Review your Best Management Practices (BMPs)
 - Field Inspection
 - Fix/refresh/replace any deficient BMPs
- ⦿ Review your facility
 - Identify where the pollutants are originating
 - Implement BMPs that may reduce the amount of pollutants

Questions?

STORMWATER@ND.GOV