

2014 Michigan Environmental Compliance Conference

NPDES Permit Program and Compliance Inspections

Presented by

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Goals and Objectives

- Ø A discussion about the NPDES permit
- Ø Information about the inspection process
- Ø Common violations found during an inspection
- Ø How to avoid those violations
- Ø What's New?



Why Are Permits Needed?



Rouge River -1969



Rouge River - 1971



Rouge River - 1987

Red Cedar River



1966



2000

Regulatory Programs

Wastewater Destinations (3.1)

1 LIQUID / WASTEWATER (INCLUDING STORMWATER) DISCHARGES

2

DIRECT DISCHARGE
3.4 and 3.5

INDIRECT DISCHARGE
3.4

3

4

NPDES PERMIT
(Surface Water Discharge)
3.2.3

STATE PERMIT
(Ground Water Discharge)
3.2.4

POTW
3.2.1

PUMP and HAUL
3.2.2

5

INDIVIDUAL
3.2.3.a

GENERAL
3.2.3.c

PERMIT-BY-RULE
3.2.3.b

STORM WATER
3.2.3.d

NON-STORM WATER
3.2.3.c

Who Needs A NPDES Permit?



- ∅ Any entity that discharges wastewater to surface waters of the state
- ∅ Any entity that discharges storm water when associated with certain industrial, municipal and construction activities
- ∅ Concentrated animal feeding operations

Three Types of NPDES Permits

1. Individual Permits

- Ø Facility specific
- Ø Tailored to facility-specific discharges
- Ø Specific to the receiving water the facility discharges to



See
Section
3.2.3.a

Three Types of NPDES Permits Cont.



2. Permit-By-Rule

Ø Requirements stated in a formally promulgated administrative rule

Ø Facility must abide by the provisions written in the rule

Ø Storm water from construction sites of one acre or more are covered by a Permit-By-Rule

See Section
3.2.3.b

Three Types of NPDES Permits Cont.

3. General Permits

- Ø Designed to authorize similar type discharges
- Ø Must be complemented by a Certificate of Coverage

EXAMPLES

Industrial Storm Water

Wastewater Stabilization Lagoons

Noncontact Cooling Water

Petroleum Contaminated Groundwater

See Section
3.2.3.c

WHAT DO YOU
KNOW ABOUT
YOUR NPDES
PERMIT?

Key Elements of a NPDES Permit

∅ **The authorization statement:**

“During the period beginning on the effective date of this permit and lasting until the expiration date of this permit, the permittee is authorized to discharge a maximum of nine hundred and seventy thousand (970,000) gallons per day of process wastewater, noncontact cooling water, and an unspecified amount of well water and storm water from Monitoring Point 001A through Outfall 001.”

Key Elements of a NPDES Permit Cont.

- Ø **Effluent limitations and monitoring requirements – parameters, sample type and location, quantification levels, and the narrative standard**

“The receiving water shall contain no unnatural turbidity, color, oil films, floating solids, foams, settleable solids, suspended solids, or deposits as a result of this discharge in quantities which are or may become injurious to any designated use.”

Key Elements of a NPDES Permit Cont.

- ∅ **Additional Studies** - mercury study, waste characterization study, whole effluent toxicity, thermal plume study
- ∅ **Specific Programs** – industrial pretreatment program, pollutant minimization program and storm water

Key Elements of a NPDES Permit Cont.

- ∅ **Definitions** - terms used in the permit
- ∅ **Monitoring Procedures**
 - **Test Procedures**
 - **Instrumentation**
 - **Record Results**
 - **Records Retention**
 - **Electronic reporting (how data must be saved and stored)**



Key Elements of a NPDES Permit Cont.

∅ **Reporting Requirements**

§ Additional Monitoring Requirements

§ Self-monitoring Requirements

ü eDMR system

ü Retained Self-monitoring

∅ **Change in Operations/Discharge**

Key Elements of a NPDES Permit Cont.

∅ **Noncompliance Notification**

“a. 24-hour reporting - Any noncompliance which may endanger health or the environment (including minimum and maximum daily concentration discharge limitation exceedances) shall be reported, verbally, within 24 hours from the time the permittee becomes aware of the noncompliance. A written submission shall also be provided within five (5) days.

Key Elements of a NPDES Permit Cont.

Ø **Noncompliance Notification Cont.**

b. other reporting - The permittee shall report, in writing, all other instances of noncompliance not described in a. above at the time monitoring reports are submitted; or, in the case of retained self-monitoring, within five (5) days from the time the permittee becomes aware of the noncompliance.

Key Elements of a NPDES Permit Cont.

∅ **Noncompliance Notification Cont.**

Written reporting shall include:

- 1) a description of the discharge and cause of noncompliance; and*
- 2) the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and the steps taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.”*

Key Elements of a NPDES Permit Cont.

- Ø **Management Responsibilities** – duty to comply, operator certification, facilities operation, power failures, right of entry
- Ø **Activities Not Authorized** – discharges to groundwater, facility construction, property rights

Why Do You Need to Know This?



These are some of the elements that we will evaluate when we conduct an inspection

Reinventing Michigan



- 1 Create more and better jobs
- 2 Leverage our new tax system
- 3 Reinvent our government
- 4 Keep our youth—our future—here
- 5 Restore our cities
- 6 Enhance our national and international image
- 7 Protect our environment
- 8 Revitalize our educational system
- 9 Reinvent our health care system
- 10 Winning in Michigan through Relentless Positive Action

www.michigan.gov/gov

Why Do We Inspect?

Ø The NPDES program is a self-monitoring program

Ø EPA Commitments

Ø DEQ Metrics

Ø Complaints

Do You Feel Like A Target?

- ∅ These commitments ensure that our inspection schedules are unbiased
- ∅ All NPDES permitted facilities can expect regular inspections (announced and unannounced)
- ∅ More complex facilities and/or those not in compliance with their permit may be inspected more often
- ∅ Not all inspections will include the same level of review

How Do We Plan Which Facilities to Inspect?

- ∅ We look at when the facility was last inspected and the type of inspection that was conducted
- ∅ The type of facility, complexity of the treatment system and nature of the wastewater discharge
- ∅ When the facility's permit will be reissued
- ∅ The compliance status of the facility
- ∅ Random selection

Types of Inspections

∅ *Compliance Sampling Inspection (CSI)*

An unannounced high-level inspection with wastewater sampling



Types of Inspections Cont.

∅ *Compliance Evaluation Inspection (CEI)*

Similar to the CSI, but it does not include sampling of the facility's wastewater

∅ *Reconnaissance Inspection (Recon)*

A low-level inspection may include a review of any number of topics



How Do We Prepare For an Inspection?

- ∅ We review the facility file to evaluate the overall compliance status of the facility
 - § Compliance with effluent limitations
 - § Has the facility reported and submitted information as required by the permit (Was it complete? Timely?)
 - § Is the facility using the appropriate test methods?

How Do We Prepare For an Inspection? Cont.

- § Who is the certified operator?
 - Do they have the proper certification?
 - Has there been a change?

- § Has the facility reported any spills?
 - Has the public complained?

- § Did the facility notify us of noncompliance as required?
 - 24-hour or “other” reporting

How Do We Prepare For An Inspection? Cont.

- § Trends in operational problems?
- § Is the facility proactive or reactive with issues regarding operation and maintenance problems?



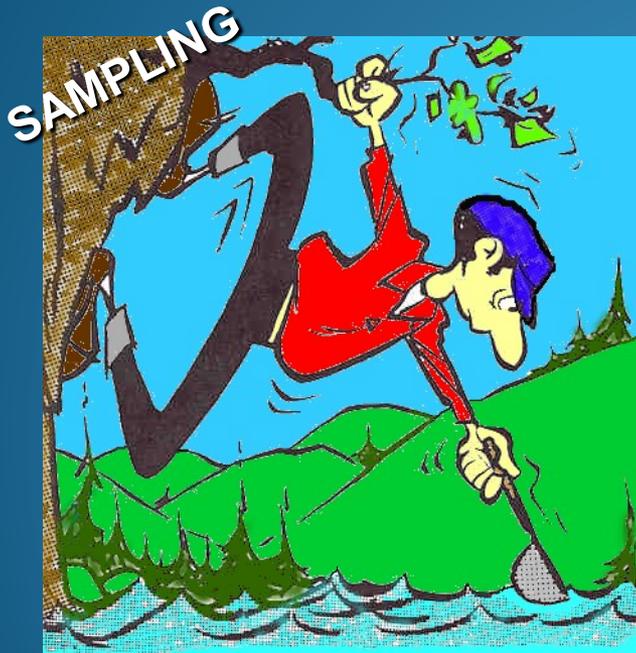
The Inspection

- ∅ We have an opening conference with the operator and/or manager of the facility to discuss the purpose of the inspection and what areas we would like to cover
- ∅ We review the facility records
- ∅ We follow the water flow:

Water into the facility  where it leaves the facility  and every point in between

The Inspection Cont.

We may also review other areas such as sampling techniques, lab, and operations and maintenance



Representative

Consistently

Proper Procedures



Correctly

The Inspection Cont.



∅ We tour the facility and the waste treatment facilities. We'll evaluate:

§ Pavement staining, pooled liquids, pipes/hoses located in interesting places



The Inspection Cont.

Plugged
weirs



§ Operation and Maintenance problems

The Inspection Cont.



§ Operation and Maintenance problems

The Inspection Cont.

§ Housekeeping issues



The Inspection Cont.



§ The visual quality of the wastewater being discharged

The Inspection Cont.

- ∅ We have a closing conference. This conference will summarize:
 - § Those areas of noncompliance that were identified
 - § Those areas that need improvement
 - § What additional information we may need
 - § What information we will be providing to the facility
 - § What our next steps are likely to be (a letter, violation letter, another inspection)

Common Violations



- ∅ Violations of the narrative standard
- ∅ The facility failed to report their noncompliance as required

Common Violations Cont.

- ∅ The facility is not monitoring at the specified frequency
- ∅ Improper test methods and quantification levels
- ∅ No QA/QC program or it is out-of-date
- ∅ Transcription problems with reported data

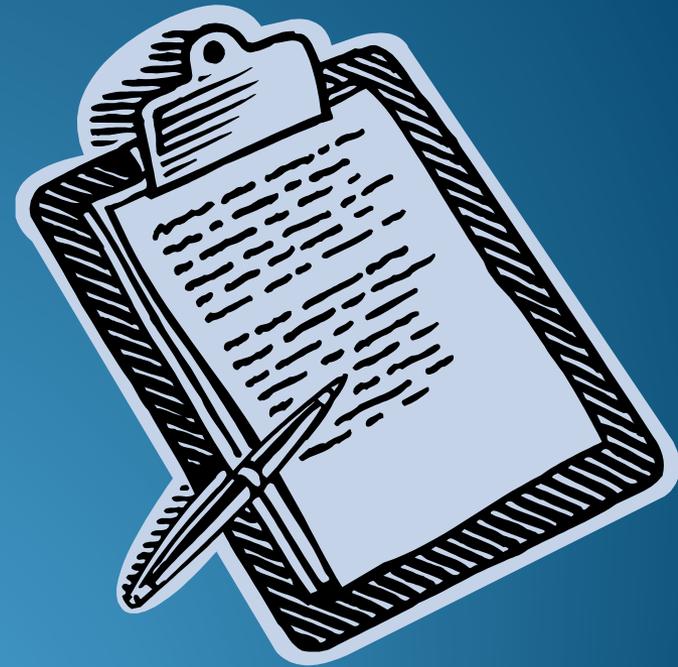
Common Violations Cont.

- ∅ Improper calculations (e.g. averages, geometric mean)
- ∅ The facility did not have a properly certified operator

If you aren't sure if your operator is properly certified, please call your district office

Common Violations Cont.

- ∅ The facility failed to send us something that was required or it was not sent timely
- ∅ The facility is not collecting or retaining all the required monitoring data



You may have done the monitoring, but you must write it down to prove it!

Common Violations Cont.

∅ Storm water issues
(such as exposure,
track-out, or
secondary containment
issues)



∅ Overall
housekeeping
of the facility



Common Violations Cont.



Ø Unpermitted discharges



How Can You Stay in Compliance With Your Permit?

- ∅ Learn to look in the right places
- ∅ Don't overlook the obvious

Staying in Compliance With Your Permit

- ∅ Read and understand your permit
- ∅ Write down important dates
- ∅ Check all your forms to ensure that you are collecting all the required information
- ∅ Double check your monitoring data for accuracy before you submit it

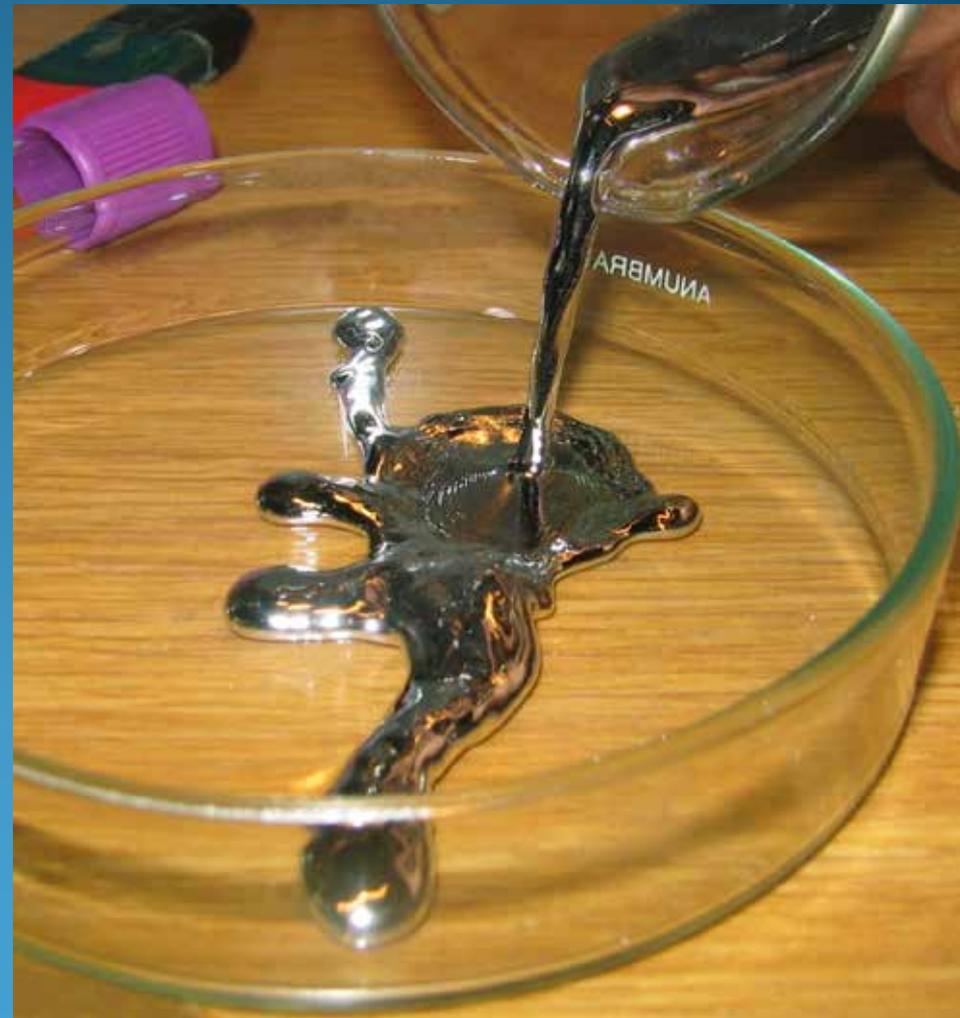


Staying in Compliance With Your Permit

- Ø Educate your employees so they don't unknowingly create a problem
- Ø If you aren't sure we need to be called for a problem, call anyway
- Ø Get to know your compliance person so you can work together when problems arise
- Ø READ YOUR PERMIT 😊

What's New?

ØMercury field
blank and field
duplicate reporting



Mercury Blank Reporting

- Ø EPA Methods 1631E & 1669 require that at least 1 field **blank** & at least 1 field **duplicate** be collected for each 10 samples per sampling event at a given site.
- Ø A field **blank** is reagent water that has been transported to the field and **treated as a sample in all respects**, including contact with the sampling devices & exposure to sampling site conditions, filtration, storage, preservation & analytical procedures.

Mercury Blank Reporting Cont.

- Ø A permittee collecting their **own** sample(s) needs to collect 1 field blank & 1 field duplicate (assuming they collect 10 or less samples) **each date/time they collect a sample** regardless of the number of outfalls being collected at their facility/site.
- Ø A contract lab collecting mercury samples for multiple facilities/sites would need to collect 1 field blank & 1 field duplicate **at each facility/site** (assuming they collect 10 or less samples at a single facility/site location.)

Mercury Blank Reporting Cont.

- Ø The Method 1631E acceptance criteria for field blanks is <0.5 ng/L or no greater than one-fifth (1/5) of the Hg in the associated sample(s), whichever is greater.
- Ø The results of the field blank & the field duplicate should be reported in the columns provided on the daily sheets

Mercury Blank Reporting Cont.

Ø Analytical results:

- 1.5 ng/L in the sample
- 0.4 ng/L in the field blank

Ø *First determine 1/5 of the Hg in the sample.*

- $1/5 \times 1.5 \text{ ng/L} = 0.3 \text{ ng/L}$

This result is less than 0.5 ng/L. Since the blank is less than 0.5 ng/L **the sample results may be blank corrected & reported as 1.1 ng/L.** The sample & field blank results should be reported on the **daily sheet**. The corrected sample result is reported on the **DMR**.

We Share The Same Goals

Ø Maintain compliance with the permit

Ø Protect public health and the environment



Questions?

