

Lab Reports, Field Forms, Labels and Chain Of Custody Forms

Green Country Stormwater Alliance

Tulsa Technology Center

Broken Arrow Campus

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Managing Data

To show that you have developed, implemented and are enforcing a storm water program, you must collect data.

Answers to the who, what, where, when, why and how questions produce data.



Avoiding Future Problems

- Illegible handwriting could lead to erroneous conclusions in the future. Write neatly!
- Prepare standard operating procedures (SOPs) for field operations so all field personnel will perform the same task in the same manner. Without SOPs and proper training, different people will do the same task in a different manner and therefore the data may not be comparable.

Proper Sampling

- Use a proper sampling container
- Preserve the sample by the correct means
- Collect a sufficient amount of sample
- Collect the sample in a manner that yields a representative sample
- Label the sample with the pertinent information in a manner that *will* be legible
- Deliver the sample to the lab in a timely fashion so the analysis can be performed within the holding time
- Deliver a chain of custody with the sample

Laboratory Reports

Get to know the personnel at the lab you use and discuss your projects with them in advance.

When you receive a laboratory report:

1. Compare the report and C-O-C for correctness.
2. Review the general laboratory information correctness.
3. Verify that the correct analyses and methods were performed.
4. Verify that holding times were met.
5. Verify that quality assurance procedures were acceptable.

Laboratory Reports

6. Do the analytical results make sense?
7. Are the results in agreement with the other reported data and agree with historical data?
8. Are the reporting units correct?
9. Are the detection limits low enough to meet your requirements.
10. Is the invoice correct?
11. If analytical work was subcontracted to another laboratory, were they certified and was it noted.

Record Keeping

Document, Document, Document!

- Always fill out a Chain-of-Custody (COC) form any time a sample is collected and will be delivered somewhere for analysis.
- If you are doing analytical work in the field, fill out a COC or keep good records on a field analytical form or in a field book.



pH Calibration Sheet

Date	Time	4.01 Buffer		7.00 Buffer		10.01 Buffer		Initials
		Value	% Rec.	Value	% Rec.	Value	% Rec.	
8/6/13	0809	4.00	99.8	7.01	100	10.00	99.9	VS *
8/6/13	1247	4.02	100	6.90	98.6	9.84	98.3	VS **
8/7/13	0812	4.00	99.8	7.00	100	10.00	99.9	VS *
8/7/13	1354	4.43	110	7.26	104	10.12	101	VS **

Comments:

* = Initial Calibration ** = Calibration Verification after last sample

$$\% \text{ Recovery} = \frac{\text{Measured Value}}{\text{True Value}} \times 100$$

pH Maintenance Log

Date	Time/ Initials	Maintenance Performed
3/23/10	1510/VS	Removed pH probe to soak in 4 buffer overnight. Put new grease on pH probe gaskets.
4/27/10	0952/VS	Installed a new pH probe, new gaskets and reset YSI pH settings back to manufacturer's original settings.
9/20/10	0635/VS	Replaced batteries in YSI Multi-Probe.

Comments:

Standard Operating Procedures

Table of Contents	
1.	Scope and Application
2.	Summary of Method
3.	Health and Safety Warnings
4.	Interferences
5.	Personnel Qualifications
6.	Equipment and Supplies
7.	Sample Collection/Preparation
8.	Analytical Procedure
9.	Calculations
10.	Data and Records Management
11.	Quality Assurance and Quality Control
12.	Maintenance
13.	References and Definitions

Labels

Container Label

Date:

Time:

Sample Site/ID:

Preservation:

Parameters:

Submitter/Company:

Collected By:

Field Forms

Develop a form for routine information gathering activities like dry weather field screening, source tracking, construction site inspections and city-owned facility inspections, etc.

Include:

- Date
- Time
- Location
- Reason for inspection
- Deficiencies
- Precipitation (last 24/48/72 hours)
- Inspector's Name
- Facility Name
- Findings

Industrial Inventory Field Sheet

City: _____ Industry Name: _____

Site Number: _____ Photo Numbers: _____

Street Address: _____

Type of Industry: _____

Material/Waste Storage Areas

1. Type of material/waste: _____

2. Method of Storage: ☐ Pile ☐ Tank ☐ Dumpster ☐ Other: _____

3. Area occupied by material/waste (acres): _____

4. Type of surface under material/waste: ☐ Paved ☐ Unpaved

5. Material/waste is disturbed: ☐ Often ☐ Sometimes ☐ Never ☐ Unsure

6. Description of spills (material, quantity & frequency): _____

7. Nearest drainage (feet) and drainage type: _____

8. Control practice: ☐ Berm ☐ Tarp ☐ Buffer ☐ None ☐ Other: _____

9. Tributary drainage area, including roofs (acres): _____

10. Does storage area drain to parking lot: ☐ Yes ☐ No ☐ Unsure

Industrial Inventory Field Sheet

Heavy Equipment Storage

1. Type of equipment: _____
2. Area covered by equipment (acres): _____
3. Type of surface under equipment: ☐ Paved ☐ Unpaved
4. Nearest drainage (feet) and drainage type: _____
5. Control practice: ☐ Berm ☐ Tarp ☐ Buffer ☐ None ☐ Other: _____
6. Tributary drainage area, including roofs (acres): _____
7. Does storage area drain to parking lot: ☐ Yes ☐ No ☐ Unsure

Railroad Yard

1. Size of yard (number of tracks): _____
2. General condition of yard: _____
3. Description of spills in yard (material, quantity & frequency): _____
4. Type of surface in yard: ☐ Paved ☐ Unpaved
5. Nearest drainage (feet) and drainage type: _____
6. Type of control practice: ☐ Berm ☐ Buffer ☐ Other: _____
7. Does yard drain to parking lot: ☐ Yes ☐ No ☐ Unsure
8. Tributary drainage area, including roofs (acres): _____

Industrial Inventory Field Sheet

Loading Docks

1. Number of truck bays: _____
2. Type of surface: ☐ Paved ☐ Unpaved
3. Description of spills in yard (material, quantity & frequency): _____
4. Nearest drainage (feet) and drainage type: _____
5. Type of control practice: ☐ Berm ☐ Buffer ☐ Other: _____
6. Does loading area drain to parking lot: ☐ Yes ☐ No ☐ Unsure
7. Tributary drainage area, including roofs (acres): _____

Industrial areas may contribute wet weather stormwater discharges and contaminate dry weather flows. This form can be used during industrial site investigations. Modify it to fit your needs.

Chain-of Custody (C-O-C) Forms

The C-O-C form can act as a legal document and contract between your system and a contract lab. It should contain the following items:

- Company, organization or facility name
- Name of the individual(s) collecting samples
- Date and time of collection and field analysis
- Analysis performed in field or requested
- Sample identification
- Sampling location

Chain-of Custody (C-O-C) Forms

- Sample preservation
- Type, size and number of containers
- Your complete address for reporting and invoicing
- Phone numbers of contact people if lab personnel have questions
- Special requests like method requirements and rush needs

Chain-of Custody (C-O-C) Forms

- The C-O-C block (relinquished and received information) should not show any gaps between sample collection and receipt at the lab if possible. Each change of possession should be recorded.
- Remember, once the analysis is complete, the sample containers with labels will be disposed leaving the C-O-C as your primary document.

A photograph of a forest path. The path is a narrow, light-colored trail that winds through a dense forest. The ground is covered with a thick layer of green undergrowth, including various leafy plants and ferns. The trees are tall and slender, with their trunks visible in the background. The overall scene is lush and green, suggesting a healthy, mature forest.

Questions?

“When we try to pick out anything by itself, we find it hitched to everything else in the Universe.” - John Muir