

# Visual Assessment Question & Answer Document

## State of Michigan Industrial Storm Water Program

Michigan Department of Environmental Quality (DEQ)  
Water Resources Division (WRD)  
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Conducting visual assessments of storm water discharges from areas of industrial activity is a new permit requirement for facilities in Michigan with industrial storm water permit coverage under the newly issued general permits and individual permits with storm water coverage. In 2014, the DEQ, WRD developed a webinar on the visual assessment requirements. This document contains a list of the questions received and the WRD response to those questions. The questions have been organized into 4 sections by subject content and you can hyperlink to that section of the document by clicking on the subject heading. If you have additional questions please contact district Industrial [Storm Water Staff](#).

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### Questions related to sample collection

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85) For a sample collected from a manhole or catch basin, would you want to collect the water from the top or against the wall rather than from the water that has collected at the bottom?		
<b><u>Questions related to visual assessment of the collected sample</u></b>		
86) For a sample collected from a manhole or catch basin, would you want to collect the water from the top or against the wall rather than from the water that has collected at the bottom?	87) Do we document both the start of the storm event and the start of the discharge?	88) How do I visually assess the sample?
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## General questions

### 1) What is a visual assessment?

A visual assessment is the observation of storm water discharges from the discharge points at a facility during and/or after a rain event or snow melt. It includes taking a sample at each discharge point, conducting a visual observation of the discharge, and assessing the sample in a well-lit area.

### 2) When do the visual assessment requirements go in effect?

The visual assessment requirements will be included in the reissued general permits for facilities with industrial storm water discharges and individual NPDES where industrial storm water discharge coverage is required. The MIS410000 and MIS420000 are the first general permits to include this requirement. The written procedures must be developed within 6 months of the issuance of the Certificate of Coverage or individual permit.

### 3) The general permit that authorizes storm water coverage for our facility does not have this requirement. When does this requirement go into effect?

This requirement will go into effect when your Certificate of Coverage is reissued. For some facilities it may be up to four years before this requirement is included in the general permit that authorizes their storm water discharge.

### 4) When do I conduct my FIRST visual assessment?

The first visual assessment must be conducted in conjunction with the next comprehensive inspection that occurs after the development of the written procedures. This would usually be between six and nine months after issuance/reissuance of the storm water permit coverage.

### 5) What is a discharge from a storm event?

They are water emissions from a facility that occur during and/or after precipitation and snowmelt that can be measured.

**6) What is a discharge point?**

The location where the point source discharge is directed to surface waters of the state either directly or indirectly through a separate storm sewer. Discharge points include outfalls and points of discharge. An outfall is the location where the discharge enters directly to a surface water of the state. A point of discharge is the location where the discharge enters into a separate storm sewer system. To put it simply, it is the location where storm water exits your facility.

**7) Where do I conduct the visual assessment?**

At your discharge point(s) after the storm water passes through all structural controls. The discharge points are required to be identified on the site map included in the SWPPP.

**8) Do we have to collect storm water samples at both outfall and discharge points?**

Yes. There are two types of discharge points, outfalls and points of discharge. Storm water samples must be collected from all discharge points within one month of the control measure observations unless there are discharge points that have been determined to have substantially identical effluents. Please refer to the compliance assistance document for more details.

**9) How is sheet flow considered to be point source discharges?**

The storm water regulations included designed sheet flow in the definition of point source discharge.

**10) Does a visual assessment need to be conducted each time there is a storm event that causes a discharge from the facility?**

No. The visual assessment only needs to be conducted once during the quarter, provided it is conducted within one month of the control measure observation portion of the comprehensive inspection.

**11) What is the reason for conducting the visual assessment within one month of the control measure observation portion of the comprehensive inspection?**

The visual assessment is actually part of the comprehensive inspection. The visual assessment is used to determine the effectiveness of the control measures that are viewed as part of the comprehensive inspection.

**12) Could the sampling frequency be reduced if no impacts are observed after an extended period of time?**

No. A visual assessment must be conducted as part of every comprehensive inspection. The frequency for conducting comprehensive inspections could be reduced if a facility demonstrates compliance for an extended period of time and has Industrial Storm Water Certified Operators that are at the facility on a regular basis. The facility would need to request an alternative schedule for conducting the comprehensive inspections. If an alternative schedule is approved for conducting comprehensive inspections at a facility it could reduce the number of visual assessments conducted during the year.

**13) When will the DEQ review my visual assessment procedures and reports?**

The written procedures for conducting the visual assessment, the visual assessment reports, and the photographic documentation of the samples will be reviewed by DEQ district staff during inspections. Inspections are usually conducted at least once per permit cycle.

**14) What is the reason for this new requirement?**

The Department of Environmental Quality (DEQ)'s Industrial Storm Water Permits were modified when they were reissued to make them consistent with Environmental Protection Agency (EPA)'s Multi-sector General Permit.

**15) What is the benefit assumed to be gained by adding these additional samples and assessments above what is already required in the comprehensive inspections?**

Storm water permit coverage requires that the discharge from a facility not cause any unnatural characteristics in the receiving waters which are or may become injurious to any designated use. By observing the actual discharge it allows you to determine how effective the control measures are that you have implemented at your facility to meet this goal.

**16) Are we required to send the quarterly samples out for testing?**

The samples collected during the visual assessment of each discharge point do not need to be sent in for chemical analysis unless your permit requires it. Most facilities that have coverage under one of the industrial storm water general permits are not required to have their storm water sample sent in for chemical analysis.

**17) Will a copy of the visual assessment webinar be available for future use?**

Yes. A copy of the visual assessment webinar, visual assessment tutorials, visual assessment compliance assistance documents, visual assessment report form, and this FAQ sheet are posted on the industrial program page of the storm water website.

**18) Is the visual assessment requirement also being added into the individual NPDES permits as they are renewed?**

Yes.

**19) Explain the annual training requirements for employees. The requirements said recommended.**

Employee training has always been required in Industrial Storm Water Permits. With the reissuance of General Permit No. MIS210000 in 2012 all industrial storm water permit coverage included the requirement that employee training be implemented on an annual basis. Training for employees that will be collecting the storm water sample should also be included in the annual employee training. The training for personnel who will be collecting the storm water sample and for Industrial Storm Water Certified Operators who will be conducting the visual assessment must be included in the written procedures.

**20) Do all facilities that are required to develop a SWPPP have to conduct the visual assessment?**

Only facilities with regulated storm water discharges from areas of industrial activity are required to develop Storm Water Pollution Prevention Plan (SWPPP) s. Therefore most of these facilities would be required to conduct a visual assessment when their Certificate of Coverage or individual NPDES permit is reissued. Some facilities that have effluent limits for storm water discharges in their individual permit may not have to conduct a visual assessment of the storm water discharges since they are already monitoring the storm water discharges.

**21) When is the SWPPP reviewed by the DEQ?**

The SWPPP is usually reviewed when storm water compliance staff conduct a compliance inspection at a facility but it can be reviewed anytime.

**22) Is it required to show potential discharge points for each significant material on the significant material list?**

Yes. This is a storm water permit coverage requirement. This information is also used to determine if you have substantially identical effluents at the discharge points.

**23) Will the department update the guidance for developing the SWPPP to include these new requirements?**

The SWPPP checklist and Industrial Storm Water Certified Operator Training Manual are being revised to reflect the new requirements. Compliance assistance documents are developed and will be posted on the Industrial Page of the Storm Water Website.

**24) What are the regulated areas at an industrial facility?**

The regulated areas are defined in 40 CFR 122.26. In general it is any area that has significant materials, has industrial processes or has had industrial activity in the past where significant materials are still exposed to storm water.

**25) Is a roof top discharge with no industrial activity considered unregulated?**

Yes. All areas of a facility that are not involved in industrial activity, have no significant materials exposed to storm water runoff or that do not have a potential for significant material materials to contact storm water runoff are not regulated.

**26) What if the discharge is comingled with other process wastewaters?**

Storm water that is comingled with other process wastewaters is no longer considered to be storm water and is only authorized to be discharged under another type of National Pollutant Discharge Elimination System (NPDES) permit that will include effluent limits with specific sampling frequencies.

**27) What do I need to do to become an Industrial Storm Water Certified Operator?**

Industrial Storm Water Certified Operator training is conducted regularly at every DEQ, District Offices. The schedules of the training sessions can be found on the Industrial Page of the Storm Water Website. Contact numbers and email addresses for registering for the training sessions are provided with the training schedule.

**28) This seems like an effort to quantify a program that has largely been qualitative in nature. Will staff exercise appropriate leniency as this new approach become culture?**

DEQ staff are available to assist with the review of written procedures and will exercise enforcement discretion as appropriate.

**29) Is it true that storm water discharges to a combined sewer is not regulated?**

Discharges to a combined sewer system are not regulated by the industrial storm water program. However they are regulated by the owner of the combined system which is subject to their own NPDES permits for discharges from their system into waters of the state.

**30) What are some reasons someone would need an alternative schedule for comprehensive inspections?**

Comprehensive inspections are required to be conducted quarterly unless a facility requests an alternative schedule. If the alternative schedule is approved by the department the facility may operate on that approved schedule. There are a number of reasons a facility may request an alternative schedule including the following examples: Facilities with seasonal operations, facilities in northern climates where everything is expected to be covered by snow during the winter quarter, facilities with long periods of no industrial activity where significant materials are not exposed to storm water, facilities with an extended period of compliance that has been documented, facilities that choose to conduct comprehensive inspections more frequently than once per quarter. If conditions change at a facility that has been granted an alternative schedule or there is noncompliance the alternative schedule may no longer be approved.

**31) Are dumpster covers required?**

You must have control measures in place at the facility to keep the storm water from being contaminated by significant materials. Covering dumpsters is one method of reducing contact with significant materials and is much cheaper than treatment of the storm water that has come into contact with the industrial wastes that are in the dumpsters. Storm water that has come in contact with industrial wastes in dumpsters is considered to be a liquid industrial waste and it is not authorized to be discharged under a general storm water permit.

**32) What is an effluent?**

An effluent is the water that is discharged from a conveyance.

## Questions related to the written procedures

**33) Do I need to develop procedures for conducting the visual assessment?**

Yes. The written procedures for conducting the visual assessment must be developed within six months of the issuance/reissuance of storm water permit coverage. The written procedures must be included in the Storm Water Pollution Prevention Plan (SWPPP).

**34) Will the written procedures for each facility need to be formally approved by the DEQ?**

No. The written procedures do not have to be submitted to the DEQ, Water Resources Division (WRD) before you begin conducting the visual assessment. The written procedures must be designed to meet the permit requirements. When an inspection is conducted at the facility, WRD staff will review the written procedures that are part of the SWPPP. If the written procedures do not meet permit requirements the written procedures will need to be revised within 30 days of notification by the department.

**35) Do the visual assessment written procedures have to be a stand-alone document or can it be incorporated into the SWPPP?**

The visual assessment written procedures must be incorporated into the SWPPP since the visual assessment is part the comprehensive inspection.

**36) Do we need a PE signature to recertify the SWPPP when the visual assessment written procedures are added?**

No. The SWPPP does not require a PE signature. However it does require a signature of an Industrial Storm Water Certified Operator and the permittee or authorized representative in accordance with 40 CFR 122.22. When the SWPPP is modified it should be resigned.

**37) What if I have multiple discharge points?**

You are required to perform a visual assessment on all discharge points where industrial activity occurs.

**38) What if I have multiple discharge points that discharge storm water from similar use areas at my facility?**

If the facility has two or more discharge points that discharge substantially identical storm water effluents, then the facility may conduct the assessment on just one of the discharge points and report that the results also apply to the other substantially identical discharge points. The determination of substantially identical discharge points is made based on the significant material evaluation conducted as part of the SWPPP development. The substantially identical discharge points must be identified on the site map. Assessment of each substantially identical discharge point must be conducted on a rotating basis.

For more information on making this determination please review the compliance assistance document on the industrial storm water web page.

**39) Is a location considered substantially different if under normal conditions there is no difference in significant materials or industrial activities? For instance, if there is construction going on but it will be finished within a few months, is that still considered an industrial process?**

Construction activities are considered to be an industrial process. The designation of discharge points having substantially identical effluents is based on having the same significant materials and industrial processes in the drainage areas for each discharge point. If something changes in one of the drainage areas for a discharge point the effluents for each discharge point can no longer be assumed to be substantially identical. The visual assessment would need to be conducted at each discharge point until the significant material and industrial processes are the same for each drainage area. Once the significant materials and industrial processes occurring in each drainage area are the same the facility could resume conducting the visual assessments from each discharge point on a rotating basis.

**40) What is the required frequency for collecting storm water samples for the visual assessment?**  
You are required to perform the visual assessment as part of each quarterly comprehensive site inspection. However, if you have been approved for an alternative comprehensive inspection schedule then the visual assessment will follow the approved alternative schedule.

**41) Who is required to conduct the visual assessment?**  
The visual assessment must be conducted by an Industrial Storm Water Certified Operator within 48 hours of the collection of the storm water sample.

**42) Does “responsibility” of the certified operator for conducting the visual assessment of the discharge allow for delegation of the assessment to trained personnel?**  
No. A supervising Industrial Storm Water Certified Operator may delegate the sample collection of a discharge from a storm event to appropriately trained personnel. However, assessment of the sample can only be done by an appropriately trained Industrial Storm Water Certified Operator.

**43) If am the Certified Operator for several facilities, how do I sample each one after a rain event?**  
There are several options to consider for collecting the sample during the visual assessment.

- Have personnel at each facility trained as an Industrial Storm Water Certified Operator(s).
- Utilize on-site personnel that have received appropriate training for collecting the storm water sample (See Question No. 63).
- Utilize automatic samplers to collect samples at the discharge points of all facilities.

The option chosen must be included in the written procedures developed for conducting the visual assessment. The assessment of the samples must be conducted by an Industrial Storm Water Certified Operator within 48 hours of collection.

**44) When do I collect the storm water sample for the visual assessment?**  
The visual assessment must be conducted within one month of the control measure observation portion of the comprehensive inspection. The storm water sample and the visual observation of the storm water discharge must be collected during the first 30 minutes of the discharge from a storm event that occurs at least 72 hours (three days) after any previous storm event that had a discharge.

**45) What is a “Qualifying Storm Event”?**  
For rain – it is a rain event that discharges storm water at least 72 hours after the previous storm event that caused a discharge. For snow melt – it is any measureable amount that causes a discharge.

**46) Does the 30 minute time frame for sample collection start at the beginning or end of the rain event?**  
The 30 minute time frame starts when the storm water begins to discharge from the facility to a municipal or private storm sewer or surface waters of the state.

**47) How do we determine exactly when the start of the discharge is? Would it be okay to assume that when rainfall reaches a tenth of an inch that is the start of the discharge?**  
Unless you have an automated sampling device or are at the discharge point when the discharge begins, the exact time of the discharge will be hard to determine. Therefore in most situations this will be an estimate. The amount of rainfall it takes to cause a discharge will vary between discharge points. In general, for paved surfaces anything less than a tenth of an inch will not cause a discharge. There are many variables that will need to be considered including rain intensity, slope of the ground, amount of imperviousness, and temperature. It may take some time for a facility to get a general idea how much rainfall it takes to cause a discharge from each discharge point. This will need to be considered when the written procedures are developed.

**48) It seems that in order to know if I'm conducting the visual assessment of a qualifying storm event, I need to be aware of every rain event at my facility. What is the best way to do this?**

Installing and monitoring a simple rain gauge at your facility is the best way to determine the date of a rain event and the amount of rain that has fallen on your facility during that event. There are also websites which can give you general information about the time, duration and amount of rainfall that has occurred in your area. The amount of rainfall it takes to cause a discharge from each outfall will be specific for each discharge point.

**49) How much storm water in a given amount of time determines if you need to conduct the visual assessment?**

The visual assessment is not dependent upon a volume of water discharged. A visual assessment may be conducted anytime there is a discharge of storm water after a qualifying storm event provided it is within 30 minutes of the beginning of the discharge and within one month of the control measure observation portion of the comprehensive inspection.

**50) What if I am not able to collect the storm water sample from the storm water discharge within the first 30 minutes?**

If it is not possible to collect the storm water sample within the first 30 minutes of the discharge you may do the observation and collection of the sample within the first 60 minutes of discharge. Provide a written explanation of why additional time was needed on the sample form.

**51) How important is it to collect the storm water sample within 30 minutes of the beginning of the discharge?**

The purpose of the visual assessment is to assess the effectiveness of storm water control measures in place at the facility. The quality of storm water will typically be at its worst during the first 30 minutes of the discharge (first flush). As storm water continues to run over the surface of the facility it will wash off contaminants that were present. All rainfall samples are required to be collected within the 30 minutes of the beginning of the storm water discharge. Samples may be collected between 30-60 minutes of the beginning of the storm water discharge, providing the reasoning for not collecting the storm water sample within 30 minutes is documented on the report form.

**52) What if the storm water flows through an oil water separator into the storm sewer? How do I determine the 30 minute window for sampling?**

Typically any water entering the oil water separator will cause a discharge of storm water from the oil water separator. Therefore when storm water starts flowing into the catch basin leading into the oil water separator you could count that as the beginning of the discharge.

**53) May the visual assessment be conducted within one month preceding the comprehensive inspection if it is conducted within the same quarter?**

Yes. The sample collection for the visual assessment may occur up to one month prior to the control measure observation portion of the comprehensive inspection.

**54) What if a discharge from a storm event does not occur during normal hours of operation within one month of the control measure observation portion of the comprehensive inspection?**

A substitute assessment may be conducted during the next qualifying storm or snow melt event that occurs before the next comprehensive inspection. Documentation of the rationale for not collecting the storm water sample within the required time period of the comprehensive inspection shall be included with the report.

**55) If there are no changes in the control measures, does a visual assessment need to be done within one month of the quarterly comprehensive inspection?**

Yes. The visual assessment is part of all comprehensive inspections and must be conducted within one month of the control measure observation portion of the comprehensive inspection even if there have been no changes to the control measures.

**56) Is it acceptable to defer sampling and the assessment of the sample to the following quarter if qualified personnel are not available?**

No. Personnel should be trained and available to collect the sample and perform the visual assessment during the normal hours of operation for the facility.

**57) What happens if no staff are available during non-working hours to collect a storm water sample from the discharge point during a storm event?**

You only have to conduct the visual assessment for discharges that occur during the facility's normal hours of operation.

**58) What if you run three shifts? What would be the normal hours of operation?**

For a facility that runs three shifts the whole 24 hour period would be considered to be normal hours of operation.

**59) What would be considered adverse weather conditions?**

Adverse weather conditions are those that create inaccessibility to the sampling location or create conditions that would be dangerous to personnel collecting the sample. Examples include: local flooding, high winds, electrical storms or icy conditions. Adverse weather conditions may also create conditions where there would be no discharge such as extended dry periods or extended cold periods where there is no measureable snow melt.

**60) If a point of discharge or outfall includes runoff from unregulated areas as well as regulated areas? I.e. employee parking lots, what is the appropriate assessment?**

If storm water runoff from an unregulated area comingles with storm water runoff from a regulated area the comingled water will need to be assessed at the discharge point.

## Questions related to sample collection

**61) Do we take a visual sample or a physical sample?**

You must do both. You must visually observe the discharge and collect a storm water sample that you can observe in a well-lit area.

**62) Who can collect the storm water sample that will be used to conduct the visual assessment?**

The storm water sample should be collected by an appropriately trained Industrial Storm Water Certified Operator. If an Industrial Storm Water Certified Operator is not available at the time of the discharge the facility may use personnel that have received appropriate training for collecting the storm water sample and recording observations of the actual discharge. Automated sampling devices may also be used to collect the sample. The training, and the personnel to be trained, must be included in the written procedures. Training of the Industrial Storm Water Certified Operator and other personnel who will collect the storm water sample and make the visual observations of the discharge must be documented.

**63) What is considered to be appropriate training for personnel who will be collecting the storm water sample and making a visual observation of the storm water discharge?**

Viewing the webinar or tutorials on Conducting the visual assessment of storm water discharges located on the Industrial Storm Water webpage is considered to be appropriate training. Other training materials may be used if they include the same subject content. Training materials must be included in the written procedures.

**64) Who needs to receive the training for conducting the visual assessment?**

The Industrial Storm Water Certified Operator and any personnel who will be collecting the storm water sample in person or from an automated sampler. Personnel who will be collecting the storm water sample need to be listed in the written procedures. Documentation of personnel who have received the training is required in the written procedures.

**65) What if storm water sheet flows off my property, how do I sample?**

Sheet flow of storm water from your facility can be a good structural control so you may not want to permanently alter this type of drainage pattern. If the flow is too shallow to directly fill a collection bottle you can overcome this by using a temporary device to concentrate the flow. Review pages 9 and 10 of EPA's Industrial Storm Water Monitoring and Sampling Guide for further details at [http://www.epa.gov/npdes/pubs/msgp\\_monitoring\\_guide.pdf](http://www.epa.gov/npdes/pubs/msgp_monitoring_guide.pdf)

**66) If a side of the facility has sheet drainage to a vegetated area, must this area be sampled for a discharge for the visual assessment?**

If the vegetated area is part of the facility the sample must be collected within 30 minutes after the water begins to discharge from the vegetated area to a storm sewer or surface waters of the state. If the vegetated area is not on the facility the sample should be collected before it enters the vegetated area. If there is no discharge from the vegetated area to a storm sewer or surface waters of the state then no visual assessment needs to be conducted.

**67) When do I conduct the visual assessment during winter?**

Look for a measureable amount of snowmelt at the discharge point within one month after the comprehensive inspection. The runoff must be measureable enough to be able to collect in a sample container.

**68) Where do you get the equipment for collecting the storm water sample?**

Most facilities will probably not need any special equipment for collecting the storm water sample. EPA has developed a sampling guide that is located at [http://water.epa.gov/polwaste/npdes/stormwater/upload/msgp\\_monitoring\\_guide.pdf](http://water.epa.gov/polwaste/npdes/stormwater/upload/msgp_monitoring_guide.pdf)

**69) How does one catch the first thirty minutes of a snow melt?**

A sample collected at a discharge point from snow melt may be collected at any time there is a measurable discharge and provided it is at least 72 hours from a rain event that caused a discharge.

**70) Would excessive snow melt be considered a good sample?**

Any snow melt sample taken within one month of the control measure observation portion of the comprehensive inspection is acceptable as long as it is a representative sample of the snow melt coming from the facility.

**71) What if snowmelt occurs during the "off" hours?**

Snowmelt is most likely to occur in the afternoon when the sun is shining. Unless the weather is cold for an extended period of time it will be relatively easy to collect a measureable sample from snowmelt within one month of the control measure observations.

**72) How do we handle seasonal shutdowns? Is monitoring required during that time?**

No. You are only required to collect the storm water sample and observe the discharge during the normal hours of operation that occur during the quarter that the comprehensive inspection is conducted. Plan ahead so you'll be ready to conduct the visual assessment when it occurs during the normal hours of operation at the facility.

**73) How do we sample when the discharge point is not accessible?**

The monitoring point for collecting the storm water sample may be upstream of the discharge point if the water at that location is representative of the actual discharge.

**74) How do we sample from a submerged discharge pipe?**

The sample would have to be collected from the discharge pipe above the point where it discharges into the receiving waters. Observations of the discharge would need to take place at the receiving waters and at the collection/monitoring point. These types of situations would need to be addressed in the written procedures. The monitoring point would need to be at a location that would provide a representative sample of the storm water discharging from the facility.

**75) How do you recommend conducting the visual assessment of discharge points on private property?**

The monitoring point for each discharge point must assess the actual storm water discharging from the facility. The visual assessment must be conducted on the storm water discharging from your facility before it comes in contact with storm water from other facilities. Often, there could be more than one location for the actual monitoring point for each discharge point. The monitoring point could be where the storm water enters a catch basin that flows into a storm sewer or the point where the storm sewer discharges to surface waters of the state. In some cases you may have to make arrangements with another property owner or construct an access point for collecting the storm water sample on your property.

**76) When do I conduct the visual assessment if we have a detention pond with a controlled discharge?**

The visual assessment from a detention pond may be conducted at any time the detention pond is allowed to discharge after a qualifying storm event as long as it is within one month of the control measure observations.

**77) Do we need to conduct the visual assessment at locations in our storm sewer system above the detention pond discharge point?**

If you are the only facility discharging storm water to the detention pond the monitoring point will usually be the location where the detention pond discharges. If other facilities discharge storm water to the detention pond the monitoring point would be the location where you discharge storm water into the detention pond.

**78) How would you sample a discharge point that continually has flow, like from an underground spring?**

This is something you would want to include in the written procedures. You may need to collect the sample upstream of the actual outfall.

**79) If the storm water sample will not be assessed within minutes of the collection, how do I store the sample?**

Seal the sample and store it in a cold refrigerator. The storm water sample will need to be assessed by an Industrial Storm Water Certified Operator in a well-lit area within 48 hours of collection.

**80) What constitutes "appropriate" storage of a sample?**

It involves sealing the sample and keeping it cool in a refrigerator or by putting it in ice.

**81) Could the collected storm water samples be mailed overnight in ice to be visually assessed by the operator if they cannot be at the site within 48 hours?**

That would be an acceptable option, provided it is included in the written procedures, if used.

**82) If a sample is collected by an automated sampler at a facility with no trained personnel: is it valid if the sample is retrieved by the Industrial Storm Water Certified Operator within 48 hours for assessment?**

An automated sample may be used to collect a storm water sample but the sample must be properly stored if the visual assessment will not be conducted by the Industrial Storm Water Certified Operator within a short time of the collection. Once the sample is properly stored, the Industrial Storm Water Certified Operator may take up to 48 hours after the sample was collected to conduct the visual assessment of the collected storm water sample. Other personnel can be trained to remove the storm water sample from the automated sampler if it is included in the visual assessment written procedures.

**83) Is there a list of DEQ approved/recommended automatic samplers?**

No. The DEQ does not have a list of approved or recommended automatic samplers.

**84) How large of a sample must be collected to conduct the visual assessment?**

The sample must be large enough so that the characteristics of the storm water sample can be adequately observed and documented by a photograph. A quart sized clear jar could be easily viewed and photographed.

**85) For a sample collected from a manhole or catch basin, would you want to collect the water from the top or against the wall rather than from the water that has collected at the bottom?**

The sample must be representative of the storm water that is discharging from the facility. In most situations you would want to collect the sample of the discharge before it went into the catch basin. If the sample is collected from the facilities storm sewer system they would want to collect the sample at the point where it discharges to the receiving waters (an outfall) or where it enters another storm sewer (a point of discharge). Do not collect a sample from a discharge that has comingled with discharges from other facilities.

**86) What information needs to be recorded with each sample?**

Each sample should be labeled with the discharge point number (the number on the site plan), date and time of the sample collection, date and time of the beginning of the discharge and the name of the person collecting the sample. The general permit lists the information that must be documented for each sample. A form is available on the Industrial Storm Water web page and the form should be used to document this information.

## Questions related to visual assessment of the collected sample

**87) Do we document both the start of the storm event and the start of the discharge?**

No. You do not have to document the beginning of the storm event. You have to document the beginning of the discharge and the time the sample is collected.

**88) How do I visually assess the sample?**

After the samples are collected, they should be viewed in a well-lit area. Mix or gently shake the sample and record your observations. Let the sample set for approximately 30 minutes and note if there are settleable solids. Document your observations with a color photograph of the sample against a white background.

**89) May the certified operator assess the discharge and sample by only viewing a color photograph?**

No. However, a visual recording other than a photograph may be used to document the visual characteristics of the discharge occurring at the time the sample is collected. The assessment of the storm water sample must be done in person by an Industrial Storm Water Certified Operator within 48 hours of sample collection.

**90) How do I document the visual assessment?**

A reporting form is available for download from the Industrial Storm Water webpage. In addition, a color photograph of the sample taken against a white background must be included with the written report.

**91) Can I use one report form for documenting all discharge points?**

The Industrial Storm Water Certified Operator must conduct the visual assessment, complete the report form, and sign the report form. Name(s) of the appropriately trained personnel that collected the sample (if other than the certified operator) must be recorded on the report form.

**92) Do I need to document if there has been no discharge from a discharge point at the facility during the quarter?**

Yes. The visual assessment is a part of the required comprehensive inspection. If there is no discharge from a discharge point until the next comprehensive inspection this will need to be documented.

**93) Is a photograph required?**

Yes. A colored photograph of the sample used to conduct the visual assessment, against a white background, is required as part of the documentation. A photograph of the sample collected at each discharge point is required. A photograph or film of the actual discharge into the storm sewer or receiving waters is optional.

**94) Who can fill out the visual assessment report form?**

The Industrial Storm Water Certified Operator must conduct the visual assessment, complete the report form, and sign the report form. Name(s) of the appropriately trained personnel that collected the sample (if other than the certified operator) must be recorded on the report form.

**95) Turbidity, Settleable Solids, and Suspended Solids the same?**

They are similar. Turbidity is the measurement of the cloudiness or the lack of clarity in the water. Usually an increase in the turbidity is due to sediment in the water. The turbidity of the water is due to the presence of suspended solids, settleable solids, and suspended liquids in the water. Suspended solids are the actual sediment and other particles that are floating within the water column. Settleable solids are the particles that are heavy enough to drop out of the water column and “settle” to the bottom after a short period of time. Settleable solids will drop out of water column within a short time after the velocity of the water is reduced or after the agitation has stopped.

**96) What happens if I find “something” in my sample or I observe unnatural characteristics at the time of the discharge?**

If the Industrial Storm Water Certified Operator observes turbidity, color, oil films, floating solids, foams, settleable solids, suspended solids, or deposits in the sample or at the time of the discharge, these observations will need to be documented on the visual assessment report form. These unnatural characteristics are likely indicative of storm water contamination.

As follow-up to the assessment, the source of the contamination must be determined and corrective actions taken to either implement, or adjust structural and/or non-structural controls to address the source of contamination. Documentation of follow-up actions recommended and taken should be included with the report.

**97) What do I do with my sample when I am done with it?**

After the Industrial Storm Water Certified Operator records the observations and photographs the sample, you can pour it out in the discharging water. You do not have to retain the storm water sample after it has been assessed by the Industrial Storm Water Certified Operator.

**98) Does a written report need to be sent to the DEQ every time there is a visual assessment or does it only need to be sent if there are issues identified during the visual assessment?**

No. The results of the visual assessment need to be documented and kept on file at the facility. A verbal notification within 24 hours and a written report within five days only need to be submitted if there are unnatural characteristics in the discharge that could lead to a violation of the Water Quality Standards in the receiving waters.

**99) How long of a retention period is required for the visual assessment records?**

The visual assessment report forms and photo documentation must be kept for three years. All storm water inspection records and other documentations are required to be kept for three years.