



**ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM
(AZPDES)**

FACT SHEET

**Multi-Sector General Permit (MSGP) for
Stormwater Discharges
Associated with Industrial Activity
from Non-Mining Facilities**

December 20, 2010

Fact Sheet: Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activity from Non-Mining Facilities

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I. Introduction

The Clean Water Act (“CWA”) establishes a comprehensive program “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a). The CWA “also seeks to attain ‘water quality which provides for the protection and propagation of fish, shellfish and wildlife.’” P.U.D. No. 1 of Jefferson City v. Washington Dep’t of Ecology, 511 U.S. 700, 704 (1994) (quoting 33 U.S.C. § 1251(a)(2)). To achieve these goals, the CWA requires U.S. Environmental Protection Agency (EPA) to authorize discharges through issuance of National Pollutant Discharge Elimination System (“NPDES”) permits.

Section 405 of the Water Quality Act of 1987 (WQA) added section 402(p) of the CWA, which directed the EPA to develop a phased approach to regulate stormwater discharges under the NPDES program. EPA published a final regulation on the first phase of this program on November 16, 1990, establishing permit application requirements for “stormwater discharges associated with industrial activity”. See 55 FR 47990. EPA defined the term “stormwater discharge associated with industrial activity” in a comprehensive manner to cover a wide variety of facilities. See 40 CFR 122.26(b)(14). The Arizona Department of Environmental Quality (ADEQ) received authorization to administer the NPDES program in Arizona on December 5, 2002. The Arizona Pollutant Discharge Elimination System (AZPDES) program, applies throughout Arizona except for Indian Country. Therefore, the AZPDES 2010 Multi-Sector General Permit (MSGP 2010) is applicable to discharges in Arizona under this statutory and regulatory authority, except for those facilities in Indian Country. Where there is no approved tribal program, EPA remains responsible, consistent with its trust authority for implementing and enforcing the NPDES program in Indian Country.

The purpose of this Fact Sheet is to describe the permitting requirements of the MSGP 2010 for stormwater discharges associated with industrial activity from all non-mining sectors. Furthermore, this Fact Sheet describes in detail the rationale for significant changes from the MSGP 2000 and ADEQ’s rationale for deviations from EPA’s 2008 permit upon which the MSGP 2010 is based. The following categories listed in 40 CFR 122.26(b)(14) are included in this non-mining MSGP: categories i, ii, iv through ix and xi. Table 1, Section III of this Fact Sheet shows the sectors covered by the permit. Appendix C of the permit presents more specific information about each non-mining sector covered by the permit. A separate mining sector MSGP (MSGP 2010 -mines) has been developed for Sector G, H, I and J.

EPA’s Fact Sheet discussed changes from their proposed 2006 MSGP to their final 2008 MSGP. While informative, this discussion is not important in the context of Arizona’s permit. The EPA 2006 MSGP was proposed on non-Indian lands in Arizona as a contingency measure to ensure that general permitting continued to be available if the decision by the Ninth Circuit Court of Appeals regarding Defenders of Wildlife v. EPA had taken effect. Had this occurred, Arizona’s AZPDES permitting program would have reverted to EPA and no longer been administered by ADEQ. As such the EPA 2006 MSGP was never formally proposed by ADEQ for adoption in Arizona. Therefore, discussions and comparisons with EPA’s 2006 MSGP in this Fact Sheet are unnecessary.

ADEQ is issuing the MSGP 2010 to replace the expired MSGP 2000. The permit will have a five year term; hence, it will expire on the fifth anniversary of the permit’s signature date in 2015. Pursuant to A.A.C. R18-9-C905 the Director may modify and reissue and revoke the permit before it expires if certain conditions, presented in 40 CFR 122.62(a) or (b), are met.

The permit contains provisions that require industrial facilities in 25 different industrial sectors to, among other things, implement control measures and develop site-specific stormwater pollution prevention plans (SWPPP) to comply with AZPDES requirements. In addition, the MSGP includes a 26th sector, allowing ADEQ to permit additional industrial activities which ADEQ determines require permit coverage for industrial stormwater discharges not included in the other 25 non-mining industrial sectors.

EPA issued the MSGP 2000 for a five-year term commencing on October 30, 2000 (65 FR 64746). EPA subsequently corrected the MSGP 2000 on January 9, 2001 (66 FR 1675-1678) and March 23, 2001 (66 FR 16233-16237). ADEQ has had authority for implementation, compliance and enforcement of EPA's MSGP 2000 since assuming responsibility for the NPDES permitting program on December 5, 2002. The MSGP 2000 expired on October 30, 2005 but was administratively continued for facilities that were covered under the permit at the time it expired. EPA's 2008 MSGP, which only applies to tribal lands in Arizona, became effective on September 29, 2008.

All facilities on non-tribal lands in Arizona subject to the permit, including those previously covered by the MSGP 2000, must now apply for coverage under ADEQ's new MSGP 2010. To be covered by this new permit, operators must submit a complete and accurate Notice of Intent (NOI) and certify in the NOI that they meet the requisite eligibility requirements, described in Part 1 of the permit, including the requirement to select, design, and install control measures to comply with the numeric effluent limitations and water quality standards in Part 2 and to develop a SWPPP, pursuant to Part 5. Once covered under the permit, a permittee is required to take corrective action if any of the conditions specified in Part 3.1.1 of the permit occur.

ADEQ's MSGP 2010 is patterned after EPA's MSGP 2008 in format and content and many of the concepts of EPA's permit are incorporated into the MSGP 2010. ADEQ'S Fact Sheet for the MSGP adopts much of the format and content of EPA's Fact Sheet for the MSGP 2008 and relies in large part on EPA's original research and analysis. In addition, ADEQ's MSGP 2010 is written to address Arizona-specific conditions and issues directly relevant to the implementation of Arizona's MSGP as well as those changes that are unique to Arizona's permit. This Fact Sheet discusses those Arizona specific changes from the EPA permit throughout.

The permit references various federal regulations. These regulations are incorporated by reference into the state AZPDES rules in the Arizona Administrative Code (A.A.C.) R18-9-A905. As an aid to reviewers, however, the permit cites the federal regulations where specific regulatory language can be found.

II. Organization of the Final Permit and Summary of Changes from the MSGP 2000

II.A Structure and Terminology of the MSGP 2010

Structure

ADEQ has divided the permit into eight parts: general requirements that apply to all permittees (i.e., permit coverage (Part 1), control measures, effluent limitations and water quality standards (Part 2), corrective actions (Part 3), inspections (Part 4), SWPPP preparation and maintenance (Part 5), monitoring (Part 6), reporting and recordkeeping requirements and

industry sector-specific conditions (Part 8). Appendices include a table of sector-specific SIC codes covered by the permit, standard conditions and guidance for calculating hardness when monitoring for metals that have hardness-based surface water quality standards. Each of these parts is discussed in more detail in Sections IV through XI of this Fact Sheet.

Terminology

Throughout this Fact Sheet certain terms are used when referring to different responsible entities. For instance, the permit holder is referred to either as the “permittee” or “operator”. Typically, the term “operator” is used when discussing those actions required prior to permit authorization, while “permittee” is used where this Fact Sheet and the permit refers to provisions that affect a covered discharger.

II.B. Summary of Major Changes from the MSGP 2000 and Major Changes between EPA’s MSGP 2008 and ADEQ’s AZPDES MSGP 2010

This section discusses the major differences between EPA’s and ADEQ’s permit.

Federal Requirements not Applicable to State Permitting Programs

Procedures covering the Endangered Species Act (ESA), National Historic Places Act (NHPA) and National Environmental Policy Act (NEPA): These programs are not applicable to Arizona’s state administered NPDES program. EPA still retains its authority for compliance with the requirements under these programs. Permittees do not have to determine eligibility under the ESA following the ESA Screening Process described in EPA’s permit and Fact Sheet, nor is there a requirement to meet any of Criteria A through F as described in the EPA Fact Sheet and MSGP 2008. USEPA retains its oversight role with respect to ADEQ-issued AZPDES permits to provide continued protection to Federally-listed species and designated critical habitat in Arizona. Likewise, ESA provisions upon which Parts 1.1.4.5 and 2.3 in EPA’s MSGP 2008 are based do not apply to state issued permits. In accordance with the above, all references to Endangered Species, Historic Properties and NEPA Review and Appendix E and F of EPA’s MSGP 2008 were removed from ADEQ’s MSGP 2010. ADEQ recommends facility operators contact the US Fish and Wildlife Service (USFWS) for conservation measures that may be required to ensure the facility is in compliance with ESA.

SWPPP Availability to federal agencies: Part 5.3 addresses the requirements for the permittee to retain a copy of the SWPPP at the facility and make it available to agencies, such as ADEQ or EPA, that have a role in regulating stormwater. As noted above, the MSGP 2010 does not include requirements regarding federal programs such as ESA, so language regarding inspections by the USFWS has been omitted.

New Source Review is a NEPA requirement for Federal programs and is not applicable to the state program.

Underground Injection Control Regulations

Permittees are encouraged to infiltrate stormwater as a means of pollutant mitigation as well as for the hydrological benefits. However, care must be taken when using such control measures at industrial sites so as to not degrade underground sources of drinking water. The Safe

Drinking Water Act (SDWA) was established to protect drinking water supplies of the U.S. It requires EPA to regulate underground injection of fluids through subsurface disposal systems that discharge wastes or other fluids that may endanger sources of drinking water (see 40 CFR Part 144). These regulations (often referred to as UIC regulations) may apply to industrial operators if their stormwater is treated by an infiltration control measure that can be classified as a Class V Injection Well (e.g., a stormwater drainage well).”

In Arizona, drywells are a common method for disposal of stormwater, especially in the urban areas of metropolitan Phoenix and Tucson. They are authorized for the disposal of stormwater only and are considered a control measure in the AZPDES stormwater program. Drywells must be registered in accordance with A.R.S § 49-332.

Drywells that drain areas where hazardous substances, including motor fuels, are used, stored, loaded or treated are required to obtain either an individual or a general aquifer protection permit (APP). See A.A.C. R18-9-C301 (general APP Type 2.01 for drywells draining areas where hazardous substances are used, stored, loaded, or treated) and A.A.C. R18-9-C304 (general APP Type 2.04 for motor fuel dispensing facilities with drywells).

Drainage areas may include loading docks, fuel pumps, waste and product storage areas, etc. ADEQ recommends against installation of drywells in such areas. However, if installation is necessary, then compliance with an applicable APP is required. Regardless of the permitting status, however, all drywell(s) must be registered.

If a drywell is used for any other discharges, it is classified as an injection well, and an individual APP is required for operation or closure. This type of operation may also trigger regulation under the federal Underground Injection Control (UIC) program. The UIC Program in Arizona is administered by EPA Region 9. Refer to EPA’s web site, <http://www.epa.gov/safewater/uic/index.html>, for additional information.

Any drywells that a facility has must be identified on the site map as part of the SWPPP and their registration numbers listed in the SWPPP.

Information Required for NOIs

The MSGP 2010 revises the information required in NOIs to provide ADEQ with adequate information to determine eligibility, to determine whether additional water quality-based requirements are necessary, and to enable ADEQ to inform the operator of its specific monitoring requirements (including identifying facilities that are inactive and unstaffed that do not require monitoring). Operators now need to include more specific information regarding classification of the receiving water into which they discharge and information about any impairments and any total maximum daily load (TMDL) specific to that waterbody. The operator must also include basic information to allow the Department to determine applicability of effluent limitations.

Water Quality-Based Effluent Requirements

EPA’s approach to requiring water quality-based effluent limits (WQBELs) was revised in the MSGP 2010 to better ensure that discharges are controlled as necessary to meet water quality standards in non-impaired receiving waters. Specific WQBEL requirements applicable to impaired waters have been included. ADEQ retains authority to assess each operator’s discharge to determine if more stringent requirements are necessary to achieve water quality standards,

including the option of requiring an operator to obtain coverage under an individual permit. The following is a more specific breakdown of the permit's new water quality-based requirements:

- Discharges to Impaired Waters – The permit contains requirements for new and existing discharges to impaired waters with or without EPA approved TMDLs. New dischargers are only eligible for discharge authorization if they demonstrate (and document) that there is either no exposure of stormwater to the pollutant for which the water is impaired, or the impairment pollutant is not present at the facility, or that the discharge is not expected to cause or contribute to a water quality standards exceedance. In the latter case, the operator must provide data to ADEQ showing that any discharge of the pollutant will meet in-stream water quality criteria at the point of discharge or that there are sufficient remaining wasteload allocations (WLAs) in a TMDL to allow the discharge, and that the existing dischargers to the waterbody are subject to compliance schedules to bring them into attainment of the water quality standards consistent with 40 CFR 122.4(i) requirements.

For existing discharges to impaired waters with EPA approved TMDLs, ADEQ will determine if more stringent requirements are necessary to ensure that the permittee is discharging consistent with the TMDL and applicable WLA. If the water is impaired but there is no completed TMDL, the discharger is required to control its discharge as necessary to meet applicable water quality standards and to conduct routine monitoring for the pollutants for which the waterbody is impaired.

- Antidegradation Requirements – ADEQ considers that the application of control measures and other requirements of the permit are sufficient to assure that Tier 2 antidegradation requirements are met. In addition, Tier 1 antidegradation protection applies to surface waters listed on the 303(d) list for the pollutant that resulted in the listing (AAC R18-11-107.01). For these waters, a regulated discharge shall not violate a water quality standard and shall not further degrade existing water quality for the pollutant that resulted in the listing.

Consistent with federal law, Arizona Administrative Code R18-11-107(B) specifically prohibits degradation of Tier I waters (where the existing water quality does not meet applicable water quality standards). If a permittee's discharge causes or contributes to non-attainment of standards, more effective and/or additional BMPs must be added. If after the implementation of additional and/or more effective BMPs the discharge continues to contribute to nonattainment, the permittee shall cease all discharges under this permit and apply for coverage under an individual permit.

TMDLs – A TMDL is the total amount of a pollutant a waterbody can receive from all sources and still meet water quality standards. TMDLs are written for waterbodies on the Impaired Waters List. Any discharge under this permit must be consistent with any applicable WLA established in a TMDL.

This permit also includes specific conditions to protect outstanding Arizona waters (OAWs). A list a list of OAWs can be found at:

http://www.azsos.gov/public_services/Title_18/18-11.htm.

- No degradation of an OAW is allowed under the Surface Water Quality Standards rules. Thus, operators seeking authorization for discharge to a direct tributary, or upstream, of an OAW must demonstrate to ADEQ that the discharge will not degrade existing water

quality in the downstream OAW. This demonstration is through submittal of the SWPPP documents, including the monitoring provisions specified in the permit.

Corrective Actions

The MSGP 2000 required certain “follow-up actions” (e.g., see Part 4.9.3 of MSGP 2000) to modify the SWPPP document or BMPs to correct identified problems. Corrective actions are clearly defined in the MSGP 2010, based on the condition identified. The permit devotes considerably more attention to corrective actions required of permittees. The provisions in Part 3 specify the types of conditions at the site that trigger corrective action requirements, what must be done to eliminate such conditions and the deadlines for completing corrective action. The permit also clarifies that failure to implement a required corrective action is a permit violation, in addition to any underlying violation that may have triggered the initial requirement for corrective action. A summary of all corrective actions initiated and/or completed each year must be reported in the annual comprehensive facility inspection report and kept with the SWPPP. See “Annual Report”, below, for further details about submittal of this information to ADEQ.

Monitoring

A number of significant changes were made to the monitoring provisions as compared to the MSGP 2000. Several of these changes are listed below. For a more detailed discussion of each of these changes, see Section IX.B.1 of the Fact Sheet.

- Inactive and unstaffed sites may exercise a waiver for benchmark monitoring and visual assessments as long as there are no industrial materials or activities exposed to stormwater at the sites.
- Unless subject to a waiver, benchmark monitoring must occur during the first year of permit coverage commencing on the date of the permittee’s Authorization to Discharge. Following 4 rounds of benchmark monitoring, if the average of the 4 monitoring values does not exceed the benchmark for that specific parameter, the permittee has fulfilled his/her monitoring requirements for that parameter for the permit term. If the average of the 4 rounds of monitoring values exceeds the benchmark, the permittee is required to either:
 1. Perform corrective actions, and conduct an additional 4 rounds of monitoring until the average value is below the benchmark, or
 2. Determine that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet applicable effluent limitations, and continue to monitor once-per-year. If such a determination is made, the permittee may reduce monitoring for that pollutant to once per year for the duration of the permit term.

At any time prior to completion of the first 4 quarters of monitoring the permittee determines that it is mathematically certain that his/her average after 4 quarters will exceed the benchmark (e.g., the sum of results to date exceeds 4 times the benchmark), the permittee must review its control measures and perform any required corrective action immediately (or document why no corrective action is required), without waiting for the full 4 quarters of monitoring data.

- A permittee who discharges a pollutant of concern to an impaired waterbody must monitor twice per wet season for the first year for that pollutant.
 - For waterbodies without an approved TMDL, monitoring may be discontinued (or reduced to the frequency in Part 6.2.1) after one year if the sample result is not above water quality standards. If the pollutant for which the waterbody is impaired is found above water quality standards, monitoring shall continue twice per wet season for the duration of permit coverage. Monitoring may also be discontinued if the permittee documents that the presence of a pollutant of concern in its discharge is attributable to natural background pollutant levels, and not to the activities of the permittee.
 - For waterbodies with an approved TMDL, monitoring may be discontinued (or reduced to the frequency in Part 6.2.1) after one year if the sample result is not above the wasteload allocation (WLA). If the pollutant for which the waterbody is impaired is found above the WLA, monitoring shall continue twice per wet season for the duration of permit coverage.
- Follow-up monitoring requirements have been added when results indicate a permittee's discharge exceeds a numeric effluent limitation, to verify that control measures have been modified to control the discharge as necessary to meet the effluent limitation. If the follow-up monitoring also exceeds the limit, the permittee must report to ADEQ within 30 calendar days of receiving the analytical data.
- The application of the effluent limits affecting stormwater discharges from coal storage piles has been modified from prior permits so that only steam electric generating facilities are regulated, as intended by the 40 CFR Part 423 Federal effluent limitations guideline.
- New provisions were added enabling dischargers to eliminate corrective action and subsequent monitoring requirements if the exceedance of benchmarks is attributable solely to natural background levels of that pollutant. To use this provision, the discharger must: (1) have benchmark results that show pollutant levels are less than or equal to the concentration of that pollutant in the natural background; (2) document the supporting rationale for concluding that benchmark exceedances are attributable solely to natural background pollutant levels; and (3) notify ADEQ in the final quarterly benchmark monitoring report that benchmark exceedances are attributable solely to natural background pollutant levels.

Annual Report

Permittees that operate facilities with discharges to impaired or outstanding Arizona waters (OAW) are required to submit to ADEQ an annual report that includes the findings from their annual comprehensive facility inspection report and a report detailing any conditions triggering corrective action and the status of those actions taken in response. A form is provided that each permittee can use in filing its annual report. This change was made to improve accountability by requiring that certain permittees report to ADEQ at least annually, thus allowing the Department to confirm that required annual inspections and corrective actions have been performed to protect impaired and unique waters of the state. ADEQ expects results from the annual comprehensive facility inspection and information on corrective actions to provide a better basis on which to judge permittee performance.

Industry Sector-specific Requirements

The following changes were made to Part 8 of the MSGP, which describes requirements specific to particular industry sectors:

- For many sectors, general requirements to address pollutant discharges from material handling areas, fueling areas, etc. were removed from the sector-specific requirements and consolidated in the control measures in Part 2.1 that are applicable to all sectors. Requirements that remain are additional, sector-specific control measures, SWPPP requirements, and/or inspection requirements.
- Sector D, Asphalt Paving and Roofing Materials and Lubricant Manufacturing – Asphalt batch plants are often co-located on sand and gravel mining sites (Sector J) and may be used intermittently, according to market conditions. Asphalt batch/ bituminous concrete plants (SIC 2951) are eligible for the modified waiver language for benchmark monitoring for inactive and unstaffed sites. To receive the waiver, facilities in this sector must remove all potential pollutant sources used in the manufacture of asphalt, with the exception of the material stockpiles, which, if co-located, are derived from the adjoining sand and gravel excavation site.
- Sector E, Glass, Clay, Cement, Concrete, and Gypsum Products – Concrete batch plants are often co-located on sand and gravel mining sites (Sector J) and may be used intermittently, according to market conditions. Only co-located ready-mixed concrete plants; those primarily engaged in mixing and delivering ready-mixed concrete (SIC 3273) are eligible for the modified waiver language for benchmark monitoring for inactive and unstaffed sites. To receive the waiver, facilities in this sector must remove all potential pollutant sources used in the manufacture of asphalt, with the exception of the material stockpiles, which are derived from the adjoining sand and gravel excavation site. Pre-cast concrete facilities (SIC 3272), manufacturers of lime (SIC 3274), gypsum products (SIC 3275) and concrete block and brick (SIC 3271) are not eligible for this waiver.
- Sector P, Land Transportation – Text has been added to include illicit plumbing connections among the potential pollutant sources to be addressed, and a requirement has been added to document specific good housekeeping control measures used in each of the facility areas. As a point of clarification, transfer stations (refuse collection and transportation of refuse) are a covered industrial activity under the permit and are discussed further in Section XI.I.
- Sector S, Air Transportation – Requirements have been added emphasizing control measures, facility inspections, good housekeeping, vehicle and equipment washwater, and monitoring during the deicing season and for implementing controls to collect or contain contaminated melt water from collection areas used for disposal of contaminated snow.

III. Categories of Facilities Covered by MSGP 2010

Coverage under the permit is available for stormwater discharges from the following 25 specified sectors of industrial activity (excluding the mineral industry Sectors G, H, I and J). The sector descriptions are based on the four digit Standard Industrial Classification (SIC) Codes and two letter Industrial Activity Codes consistent with the definition of stormwater discharge associated with industrial activity at 40 CFR 122.26(b)(14)(i, ii, iv-ix, xi). See Appendix C in the permit for specific information on each sector. A footnote in Appendix C explains where to find information on the internet on how to convert SIC codes to the NAICS. The sectors are listed in Table 1 below:

An additional Sector AD is also included. This Sector is reserved for any discharge not covered under the 25 sectors (Sector AD) that may be identified by ADEQ as appropriate for coverage.

TABLE 1 – Sectors of Industrial Activity Covered by the MSGP 2010	
Sector A – Timber Products	Sector R – Ship and Boat Building or Repairing Yards
Sector B – Paper and Allied Products Manufacturing	Sector S – Air Transportation Facilities
Sector C – Chemical and Allied Products Manufacturing	Sector T – Treatment Works
Sector D – Asphalt Paving and Roofing Materials Manufactures and Lubricant Manufacturers	Sector U – Food and Kindred Products
Sector E – Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing	Sector V – Textile Mills, Apparel, and other Fabric Products Manufacturing
Sector F – Primary Metals	Sector W – Furniture and Fixtures
Sector K – Hazardous Waste Treatment Storage or Disposal	Sector X – Printing and Publishing
Sector L – Landfills and Land Application Sites	Sector Y – Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries
Sector M – Automobile Salvage Yards	Sector Z – Leather Tanning and Finishing
Sector N – Scrap Recycling Facilities	Sector AA – Fabricated Metal Products
Sector O – Steam Electric Generating Facilities	Sector AB – Transportation Equipment, Industrial or Commercial Machinery
Sector P – Land Transportation	Sector AC – Electronic, Electrical, Photographic and Optical Goods
Sector Q – Water Transportation	Sector AD – Reserved for Facilities Not Covered Under Other Sectors and Designated by the Director

Detailed Part-by-Part Discussion of the Permit

IV. Coverage under the MSGP 2010 (Part 1)

This part describes eligibility requirements industrial facilities must meet to be covered by the permit. Part 1 describes how to apply for coverage, limitations on coverage, types of non-stormwater discharges that are allowed under the MSGP 2010, permit compliance, authorization and coverage termination, obtaining a conditional exclusion for no exposure and alternate permits.

IV.A. Eligibility (Part 1.1)

As with previous permits, to be eligible for coverage under the MSGP 2010, the discharges from industrial facilities must meet the eligibility provisions described in Part 1.1 of the permit. If they do not meet the eligibility requirement, operators must either obtain coverage under another AZPDES permit or eliminate the discharges. Unpermitted discharges of stormwater associated with industrial activities that require permit coverage will be in violation of the CWA.

IV.A.1. Allowable Stormwater Discharges (Part 1.1.2).

Part 1.1.2 specifies which stormwater discharges are eligible for coverage under the permit. As described in Section IV.A.3 of this Fact Sheet, not all stormwater discharges

associated with industrial activity are eligible for coverage under the permit (e.g., stormwater discharges regulated by certain national effluent limitations guidelines). In contrast to the MSGP 2000, the MSGP 2010 clarifies that co-located activities are eligible for coverage in addition to the primary industrial activity. Dischargers should use this section to determine which stormwater discharges from their site can be covered under the MSGP.

IV.A.2 Allowable Non-Stormwater Discharges (Part 1.1.3).

This provision lists the non-stormwater discharges authorized under the permit and are exceptions to the general exclusion of non-stormwater discharge from eligibility. To be authorized under the permit, any sources of non-stormwater (except flows from fire fighting activities) must be identified in the SWPPP. These non-stormwater discharges must be ancillary to the primary permitted use.

Uncontaminated groundwater or spring water is allowed as a non-stormwater discharge, provided the source is naturally occurring or required for the industrial activity to proceed and includes aquifer testing & well development.

The use of reclaimed wastewater for dust control, although not an allowable non-stormwater discharge, may be conducted by permittees provided the reclaimed water is not used in such prodigious amounts as to constitute disposal and is not applied during heavy storm events, such that it is mixed with stormwater that discharges offsite. The MSGP 2010 does not prohibit the use of reuse/reclaimed or potable waters on-site for dust control or for landscape irrigation that is consistent with the reclaimed water rules A.A.C. R18-9-704(G)(3)(c), provided such uses are managed in a way that there is no discharge of reclaimed water off site or to waters of the US if within the site boundary.

Permittees should be aware that many of the allowable non-stormwater discharges in Part 1.1.3 may still require permit coverage under the department's aquifer protection program (APP). Several such discharges are covered under Type 1 APP general permit (i.e., a Type 1.02, 1.03, 1.04 or 1.05).

IV.A.3 Limitations on Coverage (Part 1.1.4).

The eligibility requirements for many of the criteria in this section were modified. The rationale for these changes and for limitations on coverage under the permit is described below.

Discharges Mixed with Non-Stormwater (Part 1.1.4.1). The MSGP does not authorize stormwater discharges that are mixed with non-stormwater other than those non-stormwater discharges listed in Part 1.1.3. EPA explained in its 1995 MSGP, that the prohibition on mixed stormwater and non-stormwater discharges, centered on the fact that non-stormwater discharges (except for those classes of non-stormwater discharges that are specifically authorized by the permit) are not inadvertently authorized by the MSGP 2010. Where a stormwater discharge is mixed with non-stormwater, that this MSGP or another AZPDES permit does not authorize, the operator must submit the appropriate application forms to obtain an individual AZPDES permit to gain permit coverage for the non-stormwater portion of the discharge.

Stormwater Discharges Associated with Construction Activity (Part 1.1.4.2). The MSGP 2010 makes a distinction between construction and other types of stormwater discharges associated with industrial activity, hence stormwater discharges associated with construction activity, defined in 40 CFR 122.26(b)(14)(x) and (b)(15) are not covered by the MSGP 2010. The two exceptions to this provision are: 1) discharges from land disturbances less than one (1) acre in

size are covered by the permit consistent with Part 1.1.2, item 3 of the permit; and 2) the construction activities of Sectors G, H, I, and J are covered in a separate MSGP for the mineral industry (category iii of 40 CFR 122.26(b)(14)).

Discharges Currently or Previously Covered by another Permit (Part 1.1.4.3). This section of the MSGP describes situations where an operator is ineligible for coverage under the permit because of coverage under another permit. These include operators covered by a permit within the past five years prior to the effective date of the MSGP 2010, which established site-specific numeric water quality-based limitations developed for the stormwater component of the discharge; or operators with discharges from facilities where the associated AZPDES permit has been or is in the process of being denied, terminated, or revoked by ADEQ, although this last provision does not apply to the routine reissuance of permits every five years. To avoid conflict with the anti-backsliding provisions of the CWA, transfer from an individual permit to the MSGP is only allowed under limited conditions, including that the individual permit did not contain numeric water quality-based effluent limitations.

The provision in the MSGP 2010 is substantially similar to the one in the MSGP 2000, with two exceptions:

1. The MSGP 2000 required an operator covered under the MSGP to include in the SWPPP any sector-specific BMPs specifically required in any previous individual permit issued to that same facility. This language is no longer necessary and was deleted from the MSGP 2010 because of the changes made to the permit related to control measures and SWPPP requirements; and
2. ADEQ may specifically allow a facility to be covered under the MSGP 2010 even if one of the two identified criteria is not met. ADEQ may perform a detailed analysis and determine that for a specific facility, coverage under the permit is appropriate (e.g., does not backslide from previous permit requirements).

Discharges Subject to Effluent Limitations Guidelines (Part 1.1.4.4). Discharges subject to stormwater-specific federal effluent limitations guidelines that are eligible for coverage under the permit are listed in Tables 1-1 and 6-1 of the permit. All other stormwater and non-stormwater discharges subject to effluent limitation guidelines must be covered under an applicable alternate permit. The effluent limitation for coal pile runoff is limited to steam electric generating facilities (Sector O) in the MSGP 2010. Under the MSGP 2000, coal pile runoff was required to meet effluent limitation guidelines regardless of the industrial sector. Discharges subject to effluent limitations guidelines are discussed in greater detail in Section IX.B.2.

New Dischargers to Water Quality Impaired Waters (Part 1.1.4.5). This section gives additional requirements for coverage under the permit for new dischargers to impaired waters. For new dischargers to impaired waters, to be covered under the permit, the applicant must demonstrate that either: 1) stormwater is not exposed to the pollutant for which the water body is impaired, 2) discharges have no potential to contain the pollutant for which the water body is impaired, or 3) the discharge will not cause or contribute to an exceedance of an applicable water quality standard. In addition to the demonstration the applicant must submit the SWPPP with the NOI. The SWPPP shall identify additional control measures needed to further minimize the discharge of pollutants to ensure that the discharge will not cause or contribute to non-attainment of standards in the impaired water. ADEQ has 32 business days to review NOIs for discharges to impaired waters and notify the applicant in writing that: coverage is granted, request modifications to the SWPPP, or that the discharge is ineligible for coverage under this permit. If

the discharge is to an upstream tributary within 2.5 miles of an impaired water, the SWPPP must be submitted with the NOI.

In accordance with A.A.C. R18-11-109(D)(2), suspended sediment concentrations in surface waters within 48 hours of a local storm event are not used in assessing compliance with the water quality standard. Therefore, if a receiving water is impaired for suspended solids, turbidity or sediment/ sedimentation, a mine operator seeking authorization to discharge under the permit may satisfy the requirement of Part 1.1.4.5(1)(c)(i) of the permit either by not discharging only within the first 48 hours have elapsed after a local storm event, or by demonstrating that any discharge after that time satisfies the requirements of Part 1.1.4.5(1)(c)(i).

Discharging into Outstanding Arizona Waters (Part 1.1.4.6). Per the antidegradation rules, coverage under the MSGP 2010 is not available for new discharges directly to waters designated as outstanding Arizona waters (OAW). The MSGP 2000 stated that “you are not authorized for discharges that do not comply with your State or Tribe’s antidegradation policy for water quality standards.” The current permit specifically reflects 40 CFR 131.12(a)(3) by indicating that any new or increased discharges to OAWs are ineligible for permit coverage. Except for certain temporary changes, water quality cannot be lowered in OAWs (see 40 CFR 131.12(a)(3)).

This section also provides additional requirements for applicants seeking new or expanded discharges to tributaries upstream of an OAW. The applicant must prepare a SWPPP that demonstrates the discharge will not degrade water quality in the OAW and outline basic information that must be included with the SWPP, including a sampling and analysis plan (SAP) for required water quality monitoring. If the discharge is within 2.5 miles of an OAW, the SWPPP must be submitted with the NOI. ADEQ has 32 business days to review NOIs for discharges to impaired waters and notify the applicant in writing that: coverage is granted, request modifications to the SWPPP, or that the discharge is ineligible for coverage under this permit.

IV.B. Permit Compliance (Part 1.2)

Part 1.2 states that any failure to comply with the conditions of the permit constitutes a violation of the CWA. Where requirements and schedules for taking corrective actions are included, the time intervals are not grace periods, but are schedules considered reasonable for making repairs and improvements. For provisions specifying a time period to remedy noncompliance, the initial failure, such as a violation of a numeric or non-numeric effluent limitation, constitutes a violation of the MSGP and the CWA, and subsequent failure to remedy such deficiencies within the specified time periods constitutes an independent, additional violation of the permit and CWA.

IV.C. Authorization under the MSGP 2010 (Part 1.3)

Obtaining Authorization to Discharge (Part 1.3.1). To obtain authorization under the permit, operators must: meet the Part 1.1 eligibility requirements; select, design, install, and implement control measures in accordance with Part 2.1 to meet numeric effluent limitations and water quality standards; develop a SWPPP according to the requirements of Part 5 of the permit and submit a complete and accurate Notice of Intent (NOI) to ADEQ. In addition to submittal of an NOI and development of a SWPPP, if the applicant will discharge to a municipal separate storm sewer system (MS4) the applicant must provide the name of the MS4 on the NOI and provide a copy of ADEQ’s Authorization to Discharge to the MS4 operator. The NOI & No Exposure Certification instructions include a list of regulated MS4s.

For routine authorizations, most operators are authorized to commence discharging upon ADEQ issuance of an Authorization to Discharge, or 7 calendar days after submittal of a complete and accurate NOI. In order to rely on this 7-day provision, the operator must submit the NOI in a manner that documents the date of ADEQ's receipt (i.e., certified mail, hand delivery, fax, etc.).

ADEQ does not currently have an electronic submittal system for the MSGP 2010 that is comparable to the AZPDES Construction General Permit (CGP) Smart NOI system or EPA's e-NOI. Other options (i.e., electronic submission) may become available in the future. If that occurs, the Department will notify dischargers of the alternatives either directly, by public notice, or by making information available on the Internet. Under the permit, NOIs and Notices of Termination (NOT) (or a photocopy/ reproduction) shall be signed and dated in accordance with Appendix B.9 of the permit and submitted via fax, regular mail or overnight/ express to ADEQ at the address provided in Part 7.6 of the permit.

Table 1-2, summarizes NOI Submittal Deadlines. ADEQ's discharge authorization is organized according to type of discharger. The majority of dischargers must file an NOI for coverage under the MSGP 2010 within 120 calendar days of the permit's date of issuance. A discussion of the Table 1-2 information follows:

- **Existing dischargers** in operation as of October 30, 2005 and authorized for coverage under MSGP 2000: no later than 120 calendar days after the authorization date of the MSGP 2010 (i.e., the date of the director's signature on the MSGP 2010). The operator's authorization under the MSGP 2000 is administratively continued until coverage under this or an alternative permit is granted, or a Notice of Termination (NOT) is submitted;
- **Other eligible dischargers** in operation prior to October 30, 2005 but not covered under MSGP 2000 or another AZPDES permit: These facilities, although technically discharging without AZPDES permit coverage, are also granted 120 calendar days after the authorization date of the MSGP 2010. Coverage begins upon the operator's receipt of the Department's Authorization to Discharge;
- **New dischargers** that commence discharging after October 30, 2005: 120 calendar days after the authorization date of the MSGP 2010 for new dischargers that could not receive coverage under the expired MSGP 2000. For new discharges commencing after issuance of the MSGP 2010, an NOI must be submitted at least 32 business days before discharge is anticipated. Coverage begins upon the Department's Authorization to Discharge;
- **Change of ownership** and/or operation to a new owner/ operator of an existing facility (discharger) whose discharge is authorized under the permit: The permitted owner/ operator must submit a NOT to ADEQ within 30 calendar days after the new owner/ operator assumes responsibility for the facility. At least seven (7) calendar days prior to taking operational control of the facility, the new owner/ operator must submit a NOI to ADEQ. Coverage is transferred and continues under the new ownership.

Based on a review of the NOI or other information, ADEQ may delay the authorization of the operator's discharge, or may deny coverage under the permit and require submission of an application for an individual AZPDES permit.

If ADEQ does not receive a complete and accurate NOI certifying that the eligibility requirements of Part 1 of the permit have been met, ADEQ will notify the applicant/operator that the application is deficient or incomplete. In some cases, the applicant/operator may be required to implement additional controls before ADEQ will authorize stormwater discharge.

If the applicant seeks authorization for a new discharge to an impaired water, a copy of the SWPPP, along with the NOI, must be submitted to the Department. The department will review the SWPPP to determine whether the selected BMPs and control measures are sufficiently protective of water quality. In some cases, the applicant/operator may be required to implement additional controls before ADEQ will authorize stormwater discharge.

An applicant/operator will be authorized to commence discharging upon receipt of ADEQ's authorization document containing the "AZMSG—" approval number. Generally, Authorizations to Discharge to waters other than OAWs or impaired waters, should be issued within 7 calendar days from receipt of a complete and accurate NOI.

The deadline for existing dischargers, as described above, was increased from 60 calendar days from the effective date of the final MSGP 2000 to 120 calendar days for existing and other eligible dischargers in operation prior to October 30, 2005. New dischargers in the MSGP 2000 were required to submit NOIs 2 days prior to commencing operation of the facility.

The MSGP 2010 identifies a category of dischargers that was not identified in the MSGP 2000, "other eligible dischargers not covered under MSGP 2000 or another AZPDES permit", which include facilities for which coverage under a general permit for stormwater discharges has lapsed or for which no prior permit coverage had been obtained despite ongoing stormwater discharges. Such "other eligible dischargers" are granted the same 120 calendar day time frame to file for coverage under the MSGP 2010.

Discharge Authorization Date: Under the MSGP 2000, existing dischargers were given continued coverage under the MSGP 1995 for a period of 90 days while those dischargers obtained permit coverage. The MSGP 2010 allows for administrative continuance of the permit for existing dischargers until the new permit is issued and the existing discharger obtains coverage under the new permit or an alternative permit, or submits a Notice of Termination.

Continuation of the permit (Part 1.3.2). If the permit is not reissued or replaced (or revoked or terminated) prior to its expiration date, the Department has the authority to administratively extend coverage for existing dischargers, in accordance with A.A.C. R18-9-C903(A). If coverage is provided to a permittee prior to the expiration date of the MSGP 2010, the permittee is authorized to discharge under the permit until the earliest of: (1) the authorization for coverage under a reissuance or replacement of the permit, following timely and appropriate submittal of a complete NOI; (2) submittal of a Notice of Termination; (3) denial of coverage under the MSGP 2010, or issuance or denial of an individual AZPDES permit for the permittee's discharges; or (4) a formal permit decision by ADEQ not to reissue this general permit, at which time the Department will identify a reasonable time period for covered dischargers to seek coverage under an alternative general permit or an individual permit. As was the case after the MSGP 2000 expired, when the MSGP 2010 expires, ADEQ does not have the authority to provide coverage to facilities that were not authorized to discharge under the MSGP.

IV.D. Terminating Coverage (Part 1.4)

The purpose of submitting a Notice of Termination (NOT) is to document that a permittee's obligation to manage industrial stormwater is no longer necessary. Permittees should use the paper form to file Notices of Termination unless other options become available (i.e., electronic submission) in the future. A permittee may terminate coverage under the permit by submitting an NOT according to the instructions with the form. The permittee's authorization to discharge under the permit terminates at midnight on the day that a complete Notice of Termination is received by ADEQ. The operator will receive a Notice of Termination

acknowledgement letter from the Department. If ADEQ determines that the NOT is incomplete, the notice is not valid and the permittee must continue to comply with the conditions of the permit. In other words, the permittee remains responsible for the facility's coverage under the permit until the Department terminates the authorization to discharge.

When to Submit a Notice of Termination. The permittee must submit an NOT within 30 calendar days after a new owner or operator has assumed ownership or responsibility for the facility.

Other situations may call for a permittee to submit an NOT, but these would be at the permittee's discretion. This includes situations where: 1) operations at the facility have ceased; or 2) there no longer are discharges of stormwater associated with industrial activity and necessary sediment and erosion controls have already been implemented at the facility as required by Part 2.1.1.5. A permittee must continue to fulfill all of the requirements of the MSGP 2010 (i.e., maintain an updated SWPPP, perform inspections, maintain control measures, perform corrective actions, monitor and report results of stormwater discharge monitoring and other reporting) until the Department receives a complete NOT from the permittee.

Coverage under the MSGP terminates automatically only when the permittee obtains coverage under an individual or alternative general permit for all discharges requiring AZPDES permit coverage. This could happen either because ADEQ required it (see Part 1.6.1 of the permit) or the permittee petitioned ADEQ requesting coverage under an alternative permit. See A.A.C. R18-9-A902(A) and R18-9-A902(B).

IV.E. Conditional Exclusion for No Exposure (Part 1.5)

Facilities in Arizona with stormwater discharges associated with industrial activity may qualify for a Conditional Exclusion for No Exposure. Dischargers qualifying for No Exposure Certification must maintain a condition of "no exposure" in accordance with 40 CFR 122.26(g)(4)(iii) and the certification must be renewed by the operator every five years to remain valid. ADEQ permit language revised the EPA language to provide more detail about the intent of the no exposure exclusion and how the operator can qualify for/ comply with this exclusion from MSGP coverage. ADEQ's permit language clarifies that operators covered by this exclusion must allow ADEQ and / or MS4 representatives to inspect the facility and that reports generated from the inspection are available to the public, when requested. Facilities qualifying for coverage under this exclusion are required to furnish a copy of ADEQ's No Exposure Certification acknowledgement letter to the operator of the MS4 into which the facility discharges (where there is a stormwater discharge to the MS4). The No Exposure Certification instructions include a list of regulated MS4s. The permit also explains that ADEQ may revoke or deny the exclusion and require authorization under an individual AZPDES permit with cause.

IV.F. Alternative Permits (Part 1.6)

ADEQ Requiring Coverage under an Alternative Permit (Part 1.6.1). ADEQ may require an individual permit or coverage under an alternative AZPDES general permit instead of the MSGP. These regulations also provide that any interested party may petition EPA to take such an action. The issuance of the individual permit or alternative AZPDES general permit is in accordance with 40 CFR Part 124 and provides for public comment and appeal of any final permit decision. The circumstances in which such an action would be taken are set forth at A.A.C. R18-9-C902(A). Part 1.6.1 clarifies that the Department may require any discharger

covered under this general permit to apply for and obtain coverage under an individual permit. The Department will notify the owner or operator in writing that a permit application is required. This notice must include a brief statement of the reasons for this decision and a deadline for the owner or operator to file the application. ADEQ may grant additional time upon request of the applicant. Similarly, any interested person may petition ADEQ requesting the same.

When an individual AZPDES permit is issued to an owner or operator otherwise subject to a general AZPDES permit, the applicability of the general permit to the individual AZPDES permittee is automatically terminated on the effective date of the individual permit.

V. Control Measures, Numeric Effluent Limitations and Water Quality Standards (Part 2)

V.A. Control Measures and Technology-Based Effluent Limitations – Definition of “Minimize” (Part 2)

Part 2 describes the requirements for implementation of stormwater control measures to minimize the discharge of pollutants and meet numeric technology-based effluent limitations and water quality-based requirements. Part 2.1 requires operators to implement, as appropriate, control measures listed in the permit. In previous permits, these were referred to as best management practices (BMPs) and are referred to as non-numeric technology-based limits in the EPA MSGP 2008, but in the MSGP 2010 are known as control measures. Additional control measures may be required for discharges to Arizona listed water quality impaired waters (Part 2.2.3 of the permit).

The permit defines the term “minimize” as follows: “reduce and/or eliminate to the extent achievable using control measures that are technologically available, economically practicable and achievable in consideration of best industry practice to meet any applicable numeric effluent limitations in Part 2.2.1 and the water-quality based requirements in Parts 2.2.2 and 2.2.3.” Permittees are required to select, design, install and implement control measures that reduce or eliminate discharges of pollutants in stormwater to the extent achievable. To determine technological availability and economic achievability, operators need to consider what control measures are considered “best” for their industry, and then select and design control measures for their site that are viable in terms of cost and technology. ADEQ believes that for many facilities minimization of pollutants in stormwater discharges can be achieved without using highly engineered, complex treatment systems. The specific controls included in Part 2.1 emphasize effective “low-tech” measures, such as minimizing exposure to stormwater (albeit, without significantly increasing impervious surfaces), regular cleaning of outdoor areas where industrial activities may take place, proper maintenance of equipment, diversion of stormwater around areas where pollutants may be picked up, minimization of runoff through infiltration and flow dissipation practices, and effective advanced planning and training (e.g., for spill prevention and response).

V.A.1. Introduction to CWA Requirements to Control Pollutants in Discharges

The CWA requires that discharges from existing facilities, at a minimum, must meet technology-based effluent limitations reflecting, among other things, the technological capability of permittees to control pollutants in their discharges. Water quality-based requirements are

required by CWA Section 301(b)(1)(C). Water quality-based requirements are discussed in more detail in Section V.C. Both technology-based effluent limitations and water quality-based requirements are implemented through NPDES permits. See CWA sections 301(a) and (b).

V.A.2. Explanation of the Use of Control Measures to Meet the Permit Limits

Typically, permittees are not mandated to select, design, install and implement specific control measures. These decisions are the purview of the operator to determine what must be done to meet the applicable requirements established in Part 2.2, which include technology based effluent limitations and water quality based requirements. How this is achieved will vary by facility. Each of these control measures is acceptable and appropriate in some circumstances.

Control measures can be actions (including processes, procedures, schedules of activities, prohibitions on practices and other management practices), or structural or installed devices to prevent or minimize water pollution. They can be just about anything that “does the job” of preventing deleterious substances from entering the environment, and of meeting applicable limits. The MSGP 2010 requires industrial facility operators to select, design, install, and implement site-specific control measures to meet these limits. Most industrial facilities already have such control measures in place for product loss prevention, accident and fire prevention, worker health and safety or to comply with other environmental regulations. The permit along with this Fact Sheet provides examples of control measures, but operators must tailor these to their facilities as well as improve upon them as necessary to meet permit limits. The examples emphasize prevention over treatment. However, sometimes more traditional end-of-pipe treatment may be necessary, particularly where a facility might otherwise cause or contribute to a violation of water quality standards in the receiving water.

There are many control measures that could be used to meet the limits in the permit. The following are helpful resources for developing and implementing control measures for a facility:

- Sector-specific *Industrial Stormwater Fact Sheet Series*, (www.epa.gov/npdes/stormwater/msgp);
- *National Menu of Stormwater BMPs* (www.epa.gov/npdes/stormwater/menuofbmps);
- *National Management Measures to Control Nonpoint Source Pollution from Urban Areas* (www.epa.gov/owow/nps/urbanmm/index.html); and
- *Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices* (http://cfpub2.epa.gov/npdes/pkeyword.cfm?keywords=industrial+activities&program_id=0).

V.B. Control Measures (Part 2.1)

Part 2.1 requires the operator to select, design, install and implement control measures to meet the numeric effluent limitations and water quality standards listed in Part 2.2. The selection, design and implementation of these control measures must be in accordance with good engineering practices and manufacturer’s specifications. Regulated stormwater discharges from the facility include stormwater run-on that commingles with stormwater discharges associated with industrial activity at the facility. If operators find their control measures are not minimizing pollutant discharges adequately, the control measures must be modified as expeditiously as practicable.

V.B.1. Control Measure Selection and Design Considerations (Part 2.1.1)

The permit requires permittees to implement appropriate control measures (found in Parts 2.1.1 and 8 of the permit). ADEQ expects that the implementation of control measures will result in the reduction or elimination of pollutants from the operator's stormwater discharge to meet the effluent limitations and water quality standards in the permit. The permittee is not limited to control measures specified in the permit. ADEQ encourages permittees to consider new control measures or new applications of existing practices at times during permit coverage when adjustments to their selection, design and implementation are being considered (e.g., when corrective action is triggered). This will help ensure that control measures continue to reflect best industry practice.

The broader term "Control measures" has replaced "best management practices" and "BMPs" in the MSGP 2010. This change was adopted to better describe the range of pollutant reduction practices that may be employed, whether they are structural, non-structural or procedural. In addition, the definition of "control measures" in Appendix A of the permit includes both BMPs and "other methods" used to prevent or minimize the discharge of pollutants to receiving waters. The greater breadth of meaning of control measures vis-à-vis BMPs is why ADEQ uses this term in Part 2.1, and throughout the permit.

In Part 2.1.1 operators are required to consider certain factors when selecting control measures, including:

- Preventing stormwater from coming into contact with polluting materials is generally more effective and less costly than trying to remove pollutants from stormwater;
- Using combinations of control measures is more effective than using control measures in isolation for minimizing pollutants;
- Assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to determining which control measures will achieve the limits in the permit;
- Minimizing impervious areas at the facility and infiltrating runoff onsite (via bioretention cells, green roofs, pervious pavement, etc.) can reduce runoff, and improve groundwater recharge and stream base flows in local streams (although care must be taken to avoid groundwater contamination);
- Attenuating flow using open vegetated swales and natural depressions to reduce in-stream impacts of erosive flows;
- Conserving and restoring riparian buffers will help protect streams from stormwater runoff and improve water quality; and
- Using treatment interceptors (e.g., swirl separators, oil-water separators, sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

The following is a summary of the types of control measures permittees should evaluate and implement as appropriate in order to minimize pollutants in stormwater discharges:

Minimize Exposure to Stormwater (Part 2.1.1.1). The permit directs the permittee to minimize the exposure of manufacturing, processing, and material storage areas to precipitation and runoff through a number of options. ADEQ uses similar language to EPA's permit and requires the permittee to minimize exposure by implementing one or more of the suggested protections as determined appropriate for the facility and location.

To the extent technologically available and economically practicable and achievable, locate industrial materials and activities inside or protect them with storm-resistant coverings. This is one of the most important control options. In minimizing exposure, the permittee should pay particular attention to manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, and cleaning, maintenance, and fueling operations). Minimizing exposure prevents pollutants from coming into contact with precipitation and can reduce the need for control measures to treat or otherwise reduce pollutants in stormwater runoff. Examples include covering materials or activities with temporary structures (e.g., tarps) when wet weather is expected or moving materials or activities to existing or new permanent structures (e.g., buildings, silos, sheds). Even the simple practice of keeping a dumpster lid closed can be very effective. While the permit requires consideration of exposure minimization, neither EPA nor ADEQ recommends significantly increasing impervious surfaces to achieve it.

Good Housekeeping (Part 2.1.1.2). Keep all exposed areas that are potential pollutant sources clean. Good housekeeping is an inexpensive way to maintain a clean and orderly facility and keep contaminants out of stormwater discharges. Often the most effective first step towards preventing pollution in stormwater from industrial sites simply involves using common sense to improve the facility's basic housekeeping methods. Poor housekeeping can result in more stormwater running off a site than necessary and an increased potential for stormwater contamination. A clean and orderly work area reduces the possibility of accidental spills caused by mishandling of chemicals and equipment. Well-maintained material and chemical storage areas will reduce the possibility of stormwater mixing with pollutants.

There are some simple procedures a facility can use to implement the good housekeeping control measure, including improved operation and maintenance of industrial machinery and processes, improved materials storage practices, better materials inventory controls, more frequent and regular clean-up schedules, maintaining well organized work areas, and education programs for employees about all of these practices.

Examples of methods to implement the good housekeeping measure include containerizing materials appropriately, storing chemicals neatly and orderly; maintaining packaging in good condition; promptly cleaning up spilled liquids; sweeping, vacuuming or other cleanup of dry chemicals and wastes to prevent them from reaching receiving waters, and using designated storage areas for containers or drums to keep them from protruding where they can be ruptured or spilled. Proper storage techniques can include:

- Providing adequate aisle space to facilitate material transfer and easy access for inspections;
- Storing containers, drums, and bags away from direct traffic routes to prevent accidental spills;
- Stacking containers according to manufacturers' instructions to avoid damaging the containers from improper weight distribution;
- Storing containers on pallets or similar devices to prevent corrosion of the containers, which can result when containers come in contact with moisture on the ground; and
- Assigning the responsibility of hazardous material inventory to a limited number of people who are trained to handle hazardous materials.

Maintenance (Part 2.1.1.3). Regularly inspect, test, maintain and repair or replace all industrial equipment and systems to prevent releases of pollutants to stormwater. Maintain all control

measures in effective operating condition. Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel trained).

Most facilities will already have preventive maintenance programs (PMPs) that provide some environmental protection. Preventive maintenance involves regular inspection and testing of equipment and operational systems to uncover conditions such as cracks or slow leaks that could cause breakdowns or failures that result in discharges of pollutants to storm sewers and surface water. To prevent breakdowns and failures operators should adjust, repair or replace equipment.

As part of a typical PMP, operators must include regular inspection and maintenance of stormwater management devices and other equipment and systems. Operators should identify the devices, equipment and systems that will be inspected; provide a schedule for inspections and tests; and address appropriate adjustment, cleaning, repair or replacement of devices, equipment and systems. For stormwater management devices such as catch basins and oil-water separators, PMPs should include the periodic removal of debris to ensure that the devices are operating efficiently. For other equipment and systems, there should be procedures to reveal and correct conditions that could cause breakdowns or failures that may result in the release of pollutants.

The PMP should include a suitable records system for scheduling tests and inspections, recording test results and facilitating corrective action. The program should be developed by qualified plant personnel who evaluate the existing plant and recommend changes as necessary to protect water quality.

Spill Prevention and Response Procedures (Part 2.1.1.4). Minimize the potential for leaks, spills and other releases, which are major sources of stormwater pollution, to be exposed to stormwater. The purpose of this control measure is not only to prevent spills and leaks but, in the event one does occur, to limit environmental damage via development of spill prevention and response procedures. Operators should identify potential spill areas and keep an inventory of materials handled, used and disposed of. Based on an assessment of possible spill scenarios, permittees must specify appropriate material handling procedures, storage requirements, containment or diversion equipment, and spill cleanup procedures that will minimize the potential for spills and, in the event of a spill, ensure proper and timely response.

Areas and activities that typically pose a high risk for spills include loading and unloading areas, storage areas, process activities, and waste disposal activities. These activities and areas, and their accompanying drainage points, must be addressed in the procedures. For a spill prevention and response program to be effective, employees should clearly understand the proper procedures and requirements and have the equipment necessary to respond to spills.

The following are suggestions to incorporate into spill prevention and response procedures:

- Install leak detection devices, overflow controls and diversion berms;
- Perform visual inspections and identify signs of wear;
- Perform preventive maintenance on storage tanks, valves, pumps, pipes and other equipment;
- Use filling procedures for tanks and other equipment that minimize spills;
- Use material transfer procedures that reduce the chance of leaks or spills;
- Substitute less toxic materials;

- Ensure that clean-up materials are available where and when needed;
- Ensure appropriate security;
- Notify emergency response agencies where necessary (as specified in Part 2.1.2.4).

In the event of a spill, it is important that the facility have clear, concise, step-by-step instructions for responding to spills. The approach will depend on the specific conditions at the facility such as size, number of employees and the spill potential of the site.

Erosion and Sediment Controls (Part 2.1.1.5). Permittees must stabilize and contain runoff from exposed areas to minimize onsite erosion and sediment creation, and the accompanying discharge of pollutants (other pollutants can bind to soil and other particles and be discharged along with the sediment).

Operators must select, design, install and implement controls to address the on-site exposed areas prone to soil erosion. Erosion control practices such as seeding, mulching and sodding prevent soil from becoming dislodged and should be considered first. Sediment control practices such as silt fences, sediment ponds, and stabilized entrances trap sediment after it has eroded. Sediment control practices, such as flow velocity dissipaters and sediment catchers, should be used to back-up erosion control practices.

Management of Runoff (Part 2.1.1.6). Operators must divert, infiltrate, reuse, contain or otherwise reduce stormwater runoff to minimize pollutants in the discharge. Employ practices that direct the flow of stormwater away from areas of exposed materials or pollutant sources. Such practices can also be used to divert runoff that contains pollutants to natural areas or other types of treatment locations.

Operators may consider vegetative swales, collection and reuse of stormwater, inlet controls, snow management, infiltration devices, and wet detention/retention basins. If infiltration is a selected control, permittees should pay special attention to the discussion in Section II.B of this Fact Sheet entitled, “Underground Injection Control Regulations”.

Salt Storage Piles or Pile Containing Salt (Part 2.1.1.7). Enclose or cover piles of salt or piles containing salt used for deicing or other industrial purposes. Implement appropriate measures to minimize the exposure of the piles during the adding to or removing from processes.

Options for implementing the salt pile control measure include covering the piles or eliminating the discharge from such areas of the facility. Preventing exposure of piles to stormwater or run-on also eliminates the economic loss from materials being dissolved and washed away. A permanent under-roof storage facility is the best way to protect chemicals from precipitation and runoff, but where this is not possible, salt piles can be located on impermeable bituminous pads and covered with a waterproof cover.

Sector-Specific Control Measures (Part 2.1.1.8). Permittees must achieve any additional control measures stipulated in the relevant sector-specific controls in Part 8.

Employee Training (Part 2.1.1.9). Operators must train all employees who work in areas where industrial materials or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of the permit.

Employee training programs should thoroughly educate members of the Stormwater Pollution Prevention Team (see Part 5.1.1) on their roles in implementing the control measures employed to meet the limits in the permit. Training should address the processes and materials on the plant site, good housekeeping practices for preventing discharges, and procedures for

responding properly and rapidly to spills or other incidents. The training program should also address other requirements in the permit such as inspections and record-keeping.

Training sessions should be conducted at least annually to assure adequate understanding of the objectives of the control measures and the individual responsibilities of each employee. More frequent training may be necessary at facilities with high employee turnover or where stormwater programs are involved or multi-faceted. Often, training could be a part of routine employee meetings for safety or fire protection. Where appropriate, contractor personnel also must be trained in relevant aspects of stormwater pollution prevention.

Training sessions should review all aspects of the control measures and associated procedures. Facilities should conduct spill or incidence drills on a regular basis which can serve to evaluate the employee's knowledge of the control measures and spill procedures and are a fundamental part of employee training. Such meetings should highlight previous spill events or failures, malfunctioning equipment and new or modified control measures.

Non-Stormwater Discharges (Part 2.1.1.10). Eliminate non-stormwater discharges that are not authorized by an AZPDES permit. This limit is intended to reinforce the fact that, with the exception of the allowable non-stormwater discharges listed in Part 1.1.3; non-stormwater discharges are ineligible for coverage, pursuant to Part 1.1.4.1. Stormwater discharges that are mixed with non-stormwater sources, other than those specifically identified in and managed in compliance with the permit are not authorized. Non-stormwater discharges that are authorized under a different NPDES/ AZPDES permit may be commingled with discharges authorized under the MSGP 2010.

Where an allowable non-stormwater discharge has been identified, the permittee must document in the SWPPP the location of that discharge and the appropriate control measures implemented to meet limits. Operators must manage all non-stormwater discharge activities in a manner that does not cause nuisance conditions, including erosion in receiving channels or on surrounding properties. In many cases, the same types of controls for contaminated stormwater will suffice for non-stormwater discharges, but the nature and volume of potential pollutants in the non-stormwater discharges must be considered when selecting controls.

Superchlorinated wastewaters (i.e., containing chlorine above residual levels acceptable in drinking water systems) must be retained on-site until the chlorine dissipates, or until the water is otherwise effectively dechlorinated prior to discharge. As with any non-stormwater, if permitted by the local sanitary sewer authority, this wastewater may be discharged to the sanitary sewer. In this case, dechlorination is not required.

Operators needing help in finding and eliminating unauthorized discharges may find the following EPA guidance helpful: *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, Chapters 7, 8, 9 at: http://www.epa.gov/npdes/pubs/idde_manualwithappendices.pdf

Litter, Garbage, and Floatable Debris (Part 2.1.1.11). Operators must ensure that litter, garbage and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they leave the site.

Trash and floating debris in waterways have become significant pollutants, especially near areas where a large volume of trash can be generated in a concentrated area. Trash can cause physical impairments in waterbodies to aquatic species and birds and is also visual pollution and detracts from the aesthetic qualities of receiving waters.

This control measure may be implemented either through source control or structural control measures. For instance, to prevent garbage from being carried in runoff to receiving waters, source control would include personnel education, improved infrastructure and cleanup campaigns. Education, such as informing employees about options for recycling and waste disposal and about the consequences of littering, is one of the best ways. Another topic that should be emphasized is proper trash storage and disposal. Improved infrastructure can include optimizing the location, number, and size of trash receptacles, recycling bins, and cigarette butt receptacles based on expected need. Clean-up campaigns are an effective way to reduce trash. Facilities should determine whether the number and placement of receptacles are adequate and if regular maintenance activities (e.g., sweeping, receptacle servicing) are preventing litter from entering receiving waters. Structural controls to prevent garbage from being carried in runoff to receiving waters include physical filtering structures and continuous deflection separation. Filtering structures concentrate diffuse, floating debris and prevent it from traveling downstream. Some examples are trash racks, mesh nets, bar screens and trash booms. Continuous deflection separation targets trash from storm flows during and after heavy precipitation.

Dust Generation and Vehicle Tracking of Industrial Materials (Part 2.1.1.12). Operators must minimize generation of dust and off-site tracking of raw, final or waste materials.

Dust control practices can reduce the activities and air movement that cause dust to be generated. Airborne particles pose a dual threat to the environment and human health. Dust carried off-site increases the likelihood of water pollution. Control measures to minimize the generation of dust include:

- *Vegetative Cover.* In areas not expected to handle vehicle traffic, vegetative stabilization of disturbed soil is often desirable. By establishing a vegetative cover, exposed soil is stabilized and wind velocity at ground level can be reduced, thus reducing the potential for dust to become airborne.
- *Mulch.* Mulching can be a quick and effective means of dust control for a recently disturbed area.
- *Wind Breaks.* Wind breaks are barriers (either natural or constructed) that reduce wind velocity through a site which then reduces the possibility of suspended particles. Wind breaks can be trees or shrubs left in place during site clearing or constructed barriers such as a wind fence, snow fence, tarp curtain, hay bale, crate wall or sediment wall.
- *Stone.* Stone can be an effective dust deterrent in areas where vegetation cannot be established.
- *Spray-on Chemical Soil Treatments (Palliatives).* Examples of chemical adhesives include anionic asphalt emulsion, latex emulsion, resin-water emulsions and calcium chloride. Chemical palliatives should be used only on mineral soils. When considering chemical application to suppress dust, determine whether the chemical is biodegradable or water-soluble and what effect its application could have on the surrounding environment, including waterbodies and wildlife.

To reduce vehicle tracking of materials, the operator should keep stored or spilled materials away from all roads within the site. Specific measures such as setting up a wash site or separate pad to clean vehicles prior to their leaving the site may be effective as well.

V.C. Numeric and Water quality-based effluent limitations (Part 2.2)

The MSGP 2010 includes effluent limitation guidelines and water quality-based effluent limits (WQBELs) to control discharges as necessary to meet applicable water quality standards. The provisions of Part 2.2 constitute the numeric technology based effluent limitations and WQBELs of the permit. The WQBELs are the Water Quality Standards applicable to the receiving water in A.A.C. R18-11, Article 1. In the permit WQBELs are either referred to as the Water Quality Standards or water quality-based requirements to distinguish them for technology based effluent limitations.

Numeric Effluent Limitations Based on Effluent Limitations Guidelines (Part 2.2.1). This requirement holds permittees responsible for complying with any applicable federal effluent limitations guidelines eligible and authorized for coverage under the permit. The following describes where these limits can be found in the permit. The following table corresponds to Table 2-1 in the permit.

Regulated Activity	40 CFR Part/Subpart	Effluent Limitation
Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	Part 429, Subpart I	See Part 8.A.7
Runoff from phosphate fertilizer manufacturing facilities	Part 418, Subpart A	See Part 8.C.4
Runoff from asphalt emulsion facilities	Part 443, Subpart A	See Part 8.D.4
Runoff from material storage piles at cement manufacturing facilities	Part 411, Subpart C	See Part 8.E.5
Runoff from hazardous waste landfills	Part 445, Subpart A	See Part 8.K.6
Runoff from non-hazardous waste landfills	Part 445, Subpart B	See Part 8.L.10
Runoff from coal storage piles at steam electric generating facilities	Part 423	See Part 8.O.8

Water Quality Standards (Part 2.2.2). Each permittee is required to control its discharge as necessary to not cause or contribute to an exceedance of applicable water quality standards. ADEQ expects that compliance with the other conditions in the permit (e.g., the control measures, corrective actions, etc.) will result in discharges that are controlled as necessary to not cause or contribute to an exceedance of water quality standards in the receiving water body. If the permittee becomes aware, or ADEQ determines, that the discharge causes or contributes to a water quality standards exceedance, corrective actions and ADEQ notification are required. In addition, at any time ADEQ may impose additional, more stringent water quality-based requirements on a site-specific basis, or require an individual permit, if information suggests that the discharge is not controlled as necessary to meet applicable water quality standards.

ADEQ reserves the authority to require more stringent requirements where necessary to meet applicable standards, or, alternatively, to require the permittee to apply for an individual permit.

The permit contains additional protections to ensure compliance with water quality standards in its corrective action requirements. For instance, a particularly intense storm event may overwhelm one or more of the control measures employed at the site, leading to a short-term violation of the effluent limits. Alternatively, the operator may discover that a control measure installed in good faith to meet a particular purpose is not functioning as anticipated (e.g., because it is incorrectly sized for the site). The MSGP requires that permittees adjust their control measures during the permit term to respond to any such unanticipated event or deficiency. In this way, the operator may improve upon the initial selection, design, installation,

or implementation of control measures to further ensure that its discharges are controlled as necessary to meet applicable water quality standards. Activities that may alert an operator to the need to amend or repair control measures include:

- Routine facility inspections (Part 4.1);
- Visual assessments (Part 4.2);
- Comprehensive facility inspections (Part 4.3), including annual reports summarizing such inspections submitted pursuant to Part 7.2;
- Required monitoring for benchmarks, effluent limitations guidelines, specific State or impaired waters; or
- Information provided to ADEQ or the operator by the public (including State or local authorities) suggestive that the control measures are not stringent enough meet the water quality standards.

Discharges to Water Quality Impaired Waters (Part 2.2.3). This is a new provision which defines “impaired waters” as those which have been identified by ADEQ or EPA pursuant to Section 303(d) of the CWA as not meeting applicable State water quality standards and gives the additional permitting requirements for discharges to those waters. This may include both waters with approved TMDLs, and those for which a TMDL has not yet been approved.

The permit requires the permittee to:

- Comply with any additional, more stringent requirements that ADEQ determines are necessary to meet an applicable wasteload allocation or to further control discharges to impaired waters that do not yet have an EPA approved TMDL (See Part 2.2.3).

Prior to or after initial discharge authorization, ADEQ may require additional WQBELs on a site-specific basis, or require the permittee to obtain coverage under an individual permit, if information in the NOI, required reports, or from other sources indicates that, after implementing the control measures in Part 2.1 the facility is causing or contributing to an exceedance of water quality standards or the technology based effluent limitations in Part 2.2.

Part 2.2 includes limits that are as stringent as necessary to achieve water quality standards, consistent with 40 CFR 122.44(d)(1). ADEQ expects that facilities that select, design and implement effective control measures are likely to already be controlling their stormwater discharges to a degree that would make additional water quality-based controls unnecessary.

ADEQ relies on a narrative expression of the need to control discharges as necessary to meet applicable water quality standards, and to employ additional controls where necessary to be consistent with applicable WLAs in an approved TMDL. This is a reasonable approach for the permit, based on the following considerations:

- *Limited waterbody information available about individual dischargers prior to authorization:* ADEQ will not know prior to receiving NOIs from individual dischargers intending to be covered by the permit where these facilities are located and where they discharge. Facility operators must provide information in their NOIs identifying the receiving water into which they discharge. This was not part of the MSGP 2000. These questions are designed to help ADEQ determine what, if any, special protections apply to that water. ADEQ’s receipt of the NOI will trigger a more detailed screening process within the Department geared at determining if any waterbody-specific requirements are appropriate. It is simply impracticable to

anticipate these specific requirements ahead of time, and include as specific detailed requirements in the general permit, without knowing more about where the facility is discharging.

- *Review of the NOI and applicable watershed documents is the appropriate forum for deriving facility-specific WQBELs:* Once ADEQ receives the NOI, the Department will then be in a position to assess whether any more stringent requirements are necessary. For instance, if a particular NOI indicates that the facility will discharge to an impaired waterbody that has an approved TMDL, ADEQ will be able to review the applicable documents to determine if any additional effluent limits are necessary. Among other things, ADEQ will be analyzing the TMDL for applicable WLAs that were meant to apply to industrial stormwater discharges. After that determination has been made, ADEQ will determine how those allocations would translate into permit requirements and whether and to what extent the existing control measures are already controlling the discharge consistent with the WLA. If more stringent controls are necessary, ADEQ will notify the effected facility of the need to comply with stricter limits.
- *ADEQ may modify an operator's receiving water information based on further information.* Although the operator may correctly identify its receiving water, and properly indicate that the discharge is not to an impaired segment, ADEQ may determine on further analysis that the discharge does in fact contribute to a downstream impairment. For instance, notwithstanding an operator's correct determination that its discharge is to an unimpaired stream segment, ADEQ may find, using available TMDL information, or other data that discharges to the unimpaired segment are considered to contribute to a downstream impairment. In such an instance, ADEQ will inform the operator of this determination, and of any additional requirements that may result from the discharge to a downstream waterbody that is impaired.

Existing Discharge to an Impaired Water with an Approved TMDL (Part 2.2.3.1). ADEQ plans to implement a new review process for discharges to impaired waters with an approved TMDL. Where an operator indicates on its NOI that the discharge is to one of these waters, ADEQ will review the applicable TMDL to determine as a threshold matter whether the TMDL includes requirements that apply to the individual discharger or its industrial sector. ADEQ will determine whether any more stringent requirements are necessary to comply with the WLA, whether compliance with the existing permit limits is sufficient, or, alternatively, whether an individual permit application is necessary.

The purpose of Part 2.2.3.1 is to require compliance with applicable requirements in a TMDL and to clarify for the permittee how they will know when such requirements apply. These provisions are intended to implement the requirements of 40 CFR 122.44(d)(1)(vii)(B), which requires that water quality based requirements “are consistent with the assumptions and requirements of any available wasteload allocation for the discharge”

Existing Discharge to an Impaired Water without an Approved TMDL (Part 2.2.3.2). If the discharge is to an impaired water without a TMDL, the permit reiterates the requirement for permittees to comply with the Part 2.2.2 requirement to control its discharge as necessary to meet applicable water quality standards and comply with the monitoring requirements of Part 6.2.4. The MSGP 2000 did not specifically address discharges to impaired waters without TMDLs.

New Discharge to an Impaired Water (Part 2.2.3.3). This provision requires new dischargers to impaired waters that have become eligible through Part 1.2.4.5, to implement and maintain any control measures or conditions on the site that enabled the operator to become eligible under that condition, and to modify such measures or conditions as necessary pursuant to Part 3 corrective actions. In other words, the permittee must maintain any control measures in good working order that are necessary to meet the eligibility requirements for new dischargers to impaired waters.

Antidegradation Requirements for New or Increased Discharges. In EPA's permit, this section is focused on antidegradation requirements for new or increased discharges to Tier 2 or Tier 2.5 waters. In the MSGP 2010, ADEQ has focused additional requirements to ensure water quality protections on discharges to outstanding Arizona waters (OAWs) and tributaries of OAWs rather than Tier 2 waters. (Note: Arizona does not have Tier 2.5 waters under its antidegradation policy.) These added protections are included in Part 1.1.4.6 and deal with demonstrations required to discharge to OAWs; and Part 6.2.4 which requires additional monitoring for discharges to OAWs. The recently adopted surface water quality standards at A.A.C. R18-11-107.01(F) states:

“Antidegradation review of a general permit. The Director shall conduct the antidegradation review of a regulated discharge authorized by a general permit at the time the general permit is issued or renewed. A person seeking authorization to discharge under a general permit is not required to undergo an individual antidegradation review at the time the Notice of Intent is submitted unless the discharge may degrade existing water quality in an OAW or a water listed on the 303(d) List of impaired waters.”

VI. Corrective Actions (Part 3)

A permittee takes a corrective action to eliminate a problem or condition that has caused a failure of a control measure. The provisions in Part 3 specify the types of conditions at the site that trigger corrective action requirements, what must be done to eliminate such conditions or conduct further inquiries into their cause, and the deadlines for completing corrective action. Failure to implement a required corrective action is a permit violation, in addition to any underlying violation that may have triggered the initial requirement for corrective action. A summary of all corrective actions initiated and/or completed each year must be kept in the annual comprehensive facility inspection report and kept with the SWPPP.

Conditions Requiring Review and Revision of Control Measures to Eliminate a Problem (Part 3.1.1). Permittees are required to review and revise the selection, design, installation, and implementation of their control measures when any of the conditions described below has occurred. The conditions are all clearly indicative of a problem at the site which must be corrected. The permittee is expected to assess why one of the delineated problems occurred and eliminate the problem.

- An unauthorized discharge to a water of the US or a regulated MS4 occurs at the facility;
- A discharge violates a numeric effluent limitation guideline;
- The permittee becomes aware, or ADEQ determines, that the facility's discharge causes or contributes to an exceedance of applicable water quality standards in the receiving water or an adopted WLA;
- ADEQ, or an operator of a regulated MS4, determines that modifications to control measures are necessary to meet the requirements in Part 2.2.

The corrective action must ensure that any of the above conditions are eliminated. The MSGP 2000 required certain “follow-up actions” to modify the SWPPP document or BMPs to correct problems identified in a comprehensive site compliance evaluation. The MSGP 2010 provides a much greater specificity for correcting deficiencies that trigger the need for corrective actions and the required responses.

Permittees only have WLAs assigned to their discharges when ADEQ completes a TMDL. The TMDL development process includes a public participation process. Through that process all permittees discharging within the area included in the TMDL will be notified and have the opportunity to participate in the development of the TMDL. Through the TMDL process permittees can comment on Proposed WLAs and are made aware of the WLAs assigned.

ADEQ’s MSGP 2010 differs from EPA’s MSGP 2008 in that the MSGP 2010 does not require corrective action responses to conditions requiring review to determine if modifications are necessary. Routine facility inspections, visual assessments, or comprehensive facility inspections may reveal that control measures are not being properly operated and maintained or the average of sampling results may exceed an applicable benchmark. When one or more such conditions exist at a facility, the permittee is expected to perform further analysis to determine if revision to the site’s control measures is necessary. Although the Department does not view these conditions as part of a corrective action, the permittee is expected to remedy the situation, when discovered and before it produces a discharge in violation of the permit. For instance, if an unauthorized release has occurred at the site, this is a condition that requires attention by the permittee to ensure that it is not repeated. If, on the other hand, the average of the permittee’s four benchmark sampling results exceeds a benchmark, further analysis is necessary to decide whether the discharge of the pollutant can be further minimized using control measures that are technologically available and economically practicable and achievable in light of best industry practice.

Substantially Identical Outfalls (Part 3.1.2). If the event triggering corrective action is linked to an outfall that represents other substantially identical outfalls, the permittee’s review must assess the need for corrective action for each outfall represented by the outfall that triggered the review. Any necessary changes to control measures that affect these other outfalls must also be made before the next storm event if possible, or as soon as practicable following that storm event. Assessing every substantially identical outfall may not be possible before the next measurable storm event, but permittees should develop, document, and implement a schedule based on the likelihood of discharge.

Corrective Action Deadlines (Part 3.2). The permit includes specific deadlines for permittees to take corrective actions. Part 3.2 requires that within 72 hours following identification or discovery of any of the conditions listed in Parts 3.1, the permittee must document such discovery. Subsequently, within 14 calendar days of the discovery, the permittee must document corrective actions taken or to be taken to eliminate the condition and any additional review necessary to further investigate the condition. If the permittee determines that changes are necessary following the review, any modifications to the control measures must be made before the next storm event if possible, or as soon as practicable following that storm event. The time limits are considered reasonable for documenting that a problem has been identified and then conducting the required analysis and making any necessary repairs or modifications. These timeframes are included to ensure that deficiencies are corrected expeditiously. Failure to take the required corrective action within the stipulated time limit constitutes an independent permit violation.

While changes to control measures are still required by the next anticipated storm event, where feasible, the permit does not cap the amount of time to complete corrective action at 12 weeks as was done in MSGP 2000. This change was made in response to comments raising the concern that the 12-week timeframe did not account for the time it might take to complete the necessary evaluations and select, design, and install new or modified control measures. Actions must still be taken by the next anticipated storm event where feasible, but this change allows flexibility where the need exists. In the vast majority of cases, corrective action reviews will identify responses that can be taken quickly, either before the next storm event or shortly thereafter. Permittees are expected to document and justify any schedules for selecting, designing, and installing new or modified control measures.

The MSGP 2010 contains new language clarifying that permittees must document deficiencies immediately (i.e., within 72 hours) as a way to more clearly provide a starting point on which corrective actions are to be based. This initial documentation need not be detailed but merely to acknowledge the date of the finding and a general discussion of the findings of the review that necessitates corrective action. More detailed documentation, as described below, continues to be required within 14 calendar days of the discovery.

Corrective Action Report (Part 3.3). The purpose of Part 3.3 is to ensure compliance with corrective action requirements through increased accountability and oversight. Ongoing assessment of control measure effectiveness and corrective actions is an integral part of an effective stormwater management program. Hence, permittees must document basic information for any event described in Part 3.1 and the permittee's response to that event. As described above, the permit establishes conditions for both 72-hour and 14-day response periods. The Corrective Action section (Section D) of the Annual Report Form should be used by permittees to clarify expectations for documentation of conditions triggering a response and the details of the response taken. For triggering events affecting substantially identical outfalls (see Part 3.1.2), ADEQ intends that permittees document substantially identical outfalls in the same manner as the conditions required in Part 3.1.1. As described in Part 5 of the permit, permittees are required to maintain a copy of this documentation with their SWPPP. Permittees with facilities that discharge to an impaired water or OAW must also submit this information in an annual report.

All dischargers are required to document corrective actions taken in the annual comprehensive facility inspection (CFI) report. In addition, those facilities that discharge to impaired waters or OAWs, in accordance with Part 7.2 of the permit, are required to submit Annual Reports identifying corrective actions taken by permittees over the course of the previous year. ADEQ expects that information submitted in the Annual Report, or documented in the CFI, will help determine how well operators are responding to potential deficiencies on the ground and where a facility may require further Department oversight. The MSGP 2010 expands on the MSGP 2000 requirement by requiring permittees to identify any deficiencies and corresponding corrective actions whether that is done as part of a comprehensive evaluation or any other instance when such a deficiency is identified.

VII. Inspections (Part 4)

Part 4 describes the inspection and evaluation of the performance of existing stormwater control measures. Generally, the permit requires all facility operators to conduct three types of inspections every year: routine quarterly inspections; four visual assessments (two in the summer and two in the winter wet seasons – see Section IX.A.4 of this Fact Sheet) during times of

stormwater discharge; and an annual comprehensive facility inspection. The permit specifies in detail the monitoring and reporting requirements for each type of monitoring. Each is described in more detail below. Inactive and unstaffed sites qualify for certain exceptions, which are described in the sections below.

Permittees must conduct the inspections at the facility in accordance with Parts 4.1, 4.2, and 4.3 of the permit. If, during any routine inspection, quarterly visual assessment, or comprehensive facility inspection, the facility's control measures are found not to be properly operated and / or maintained, the permittee shall review the selection, design, installation, and implementation of the control measures to determine if modifications are necessary to meet the requirements in Part 2.2 in the permit. Such modifications shall be documented in the SWPPP and implemented as expeditiously as practicable.

VII.A. Routine Facility Inspections (Part 4.1)

Permittees are required to conduct routine inspections, at least quarterly, of all areas of the facility where industrial materials or activities are exposed to stormwater, and of all stormwater control measures used to comply with the requirements in Part 2.2 of the MSGP. Routine facility inspections are less formal evaluations of the facility's exposed industrial activities than the comprehensive facility inspections required in Part 4.3 of the MSGP 2010. A routine facility inspection provides permittees with a mechanism to ensure that developing problems are detected and addressed early and helps ensure that stormwater control measures are adequate and are operated and maintained properly.

Qualified personnel must conduct the routine facility inspections with at least one member of the Pollution Prevention Team participating. If only one person regularly conducts the inspection, that individual must be the Pollution Prevention Team member. Because some equipment, processes, and procedures may require more frequent inspections, the relevant inspection schedules must be documented in the SWPPP. For example, inspection of outdoor areas associated with regular industrial activity may require more frequent inspections to ensure that the site is swept, garbage picked up, drips and spills cleaned, etc. on a regular basis.

Part 4.1 elaborates on the specific information to be documented for each routine inspection. Most importantly, this documentation must include when the inspection took place, who conducted the inspection, and any indication that controls may not be adequate or are not functioning properly. The findings of these routine inspections must be maintained on-site with the SWPPP.

Weather information for the period since the last inspection is a required part of the routine facility inspection documentation and should include the type of information discussed in EPA's 2009 SWPPP Guide, such as:

- Best estimate of the beginning of each storm event,
- Duration of each event,
- Time elapsed since last storm event,
- Approximate amount of rainfall for each event (in inches);
- Estimate of the temperature; and
- Any other relevant ambient conditions.

Some industry sectors have more specific routine inspection requirements, which are described in more detail in Part 8 of the permit for the relevant sectors.

At least once each calendar year, the routine facility inspection must be initiated during a period when a stormwater discharge is occurring. As permittees are also required to perform visual monitoring, benchmark monitoring, and effluent limitations monitoring during storm events, permittees may combine two or more of these activities, when possible, during an inspection. This is a potentially important tool for the permittee to be able to better identify sources of pollutants discharged in stormwater runoff from the facility and to actively observe the effectiveness of control measures.

A number of changes were made to the routine inspection requirements in comparison to the MSGP 2000, including:

- Specifying a minimum frequency of quarterly inspections – Except for some sector-specific requirements, the MSGP 2000 did not specify any generally-applicable frequency for routine inspections. Part 8 of the MSGP 2010 requires some sectors to conduct inspections on more frequent intervals;
- Adding the requirement to initiate at least one routine facility inspection each year in response to a measurable storm event. The inspection must commence not more than 24 hours after the end of a storm event, but not 24 hours after the discharge ceases;
- Adding details on the minimum elements of a routine facility inspection report; and
- Adding a requirement that at least one member of the Stormwater Pollution Prevention Team must participate in the inspection. There is no limit on whom or the number of persons that may be included on the Pollution Prevention Team. The intent of this new requirement is not to require any particular plant officer to participate in inspections or to specify either a minimum or maximum number of persons to conduct an inspection. Instead, the intent is to ensure that inspections are carried out by qualified personnel. By requiring that inspectors be formally identified as part of the Stormwater Pollution Prevention Team will help ensure that they are properly trained to carry out effective inspections. The permittee may choose to have only one person perform these inspections, provided that the individual meets the definition of a qualified person in Appendix A and is a member of the Pollution Prevention Team.

The routine inspection requirements in the MSGP 2000 also included a requirement to modify the SWPPP within 14 days of the inspection if deficiencies in the SWPPP were identified. See Section VI of this Fact Sheet for additional discussion of corrective action in response to inspection findings.

VII.B. Visual Assessment of Stormwater Discharges (Part 4.2)

Visual assessments provide a useful and inexpensive means for permittees to evaluate the effectiveness of their control measures. The MSGP 2010 requirement for visual assessments was changed from quarterly (as in the two previous MSGPs) to one that is more compatible with Arizona's summer and winter wet seasons. While four visual inspections must be conducted annually, they are to be performed during rainfall events in the winter and summer wet seasons. The visual examinations must still be conducted when the site is discharging. A visual assessment can be conducted concurrently with a routine facility inspection required by Part 4.1.

Periodic visual inspections of a facility are necessary to ensure that the SWPPP addresses any significant changes to the facility's operations or control measure implementation procedures. All industrial sectors covered by the permit are required to conduct these

examinations. To ensure that all inspection and assessment requirements were described in the same part of the permit, visual assessments were moved from the monitoring section of the MSGP 2000 to a new Part 4.2 in the MSGP 2010 that addresses inspections.

The permit requires that grab samples of stormwater discharges be taken and examined visually for the presence of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollution. No analytical tests are required to be performed on these samples. The grab samples must be taken within the first 30 minutes or as soon as practicable after the occurrence of an actual discharge from the site (including documentation of why sampling was not practicable within the first 30 minutes). The permit no longer requires a storm event of at least one-tenth (0.1) inch or that this discharge occurs during daylight hours; instead, the trigger for visual monitoring simply requires that the precipitation event causes an actual discharge.

Areas Subject to Snow: In areas subject to snow, the permittee may complete one wet season visual assessment by collecting snowmelt discharge. Significant snowfall only occurs regularly in the high country in Arizona, which is the only place the Department would expect such sampling to be applicable. These snowfall events tend to be isolated in geography and occurrence (i.e., relatively infrequent), so for practical purposes, the permit does not require that these snowmelt samples be collected within the first 30 minutes of discharge as is the case for samples collected during rain events.

Permittees must document the results of their visual assessments in a report that includes the sample location, date and time, personnel collecting the sample and performing visual assessments, results of the observations, and probable sources of any observed stormwater contamination. The visual examination reports must be maintained onsite with the SWPPP.

When conducting a stormwater visual examination, the pollution prevention team, or individual team member, should attempt to relate the results of the examination to potential sources of stormwater contamination on the site. For example, if an oil sheen is observed, facility personnel (preferably members of the pollution prevention team) should conduct an inspection of the area of the site draining to the examined discharge to look for obvious sources of spilled oil, leaks, etc. If a source can be located, then this information would allow the facility operator to immediately conduct a clean-up of the pollutant source, and/or to revise control measures to minimize the contaminant source.

Exceptions to Visual Assessments (Part 4.2.3)

Absence of Discharge: Permittees are excused from visual assessments for the facility or outfall(s) during a particular wet season when no storm event results in a discharge, provided that the permittee documents in the monitoring records and retains with the SWPPP why a sample could not be collected. This is a condition typical of arid climates, such as Arizona's.

Adverse Conditions: The permit includes exceptions to these requirements in order to account for circumstances during which conducting visual assessments may be infeasible, namely during adverse conditions (e.g., dangerous weather or other conditions of temporary inaccessibility). Typical situations as a result of adverse weather that create dangerous conditions for personnel could be local flooding, high winds, hurricane, tornadoes, or electrical storms or other unsafe conditions that make the collection of a sample temporarily infeasible. Permittees have flexibility to modify their assessment schedule such that the four assessments are conducted over the course of the year during periods when discharges actually occur and can be safely observed.

Inactive and unstaffed sites: Operators of inactive and unstaffed sites may invoke a visual monitoring exception if they eliminate all exposure of industrial activities and materials to stormwater, and document this in the SWPPP. This waiver is available to all sectors covered under the permit. All facilities that make use of this waiver must still implement any necessary control measures and comply with other applicable permit requirements. Inactive and unstaffed sites that are unable to meet the “no exposure” requirement must conduct at least on visual assessment.

Substantially identical outfalls: Operators with two or more substantially identical outfalls may also elect to conduct a visual assessment at just one of these outfalls each time a visual assessment is performed. However, these assessments must be done on a rotating basis throughout the year to ensure that each substantially identical outfall is periodically observed throughout the period of permit coverage. If stormwater contamination is identified through visual monitoring performed at a substantially identical outfall, the operator must assess and modify his/her control measures as appropriate for each outfall represented by the monitored outfall. The intent is for operators to assess discharges from the entire site over the term of the permit, and address any identified problems at all substantially identical outfalls where the problem may be occurring.

A number of changes were made to the visual assessment requirements in comparison to the MSGP 2000, including:

- “Visual monitoring requirements” were moved from the monitoring part of the permit to the inspections part, under the title, “visual assessment of stormwater discharges;”
- The four visual assessments must be conducted annually; two each during Arizona’s summer and winter wet seasons, rather than quarterly under EPA’s MSGP 2008;
- Added language (“Absence of Discharge”) addressing situations when a discharge does not occur at a facility, even though there may have been several storm events occur during a particular wet season. In such cases, the permittee’s only documentation in the SWPPP or DMR could be “no discharge observed”;
- Replaced the requirement to take samples no later than the first hour of a measurable storm event with language that allows for sampling “as soon as practicable after the first 30 minutes.” The provision also requires documentation with the SWPPP explaining why it was not possible to take samples within the first 30 minutes;
- Deleted the requirement that samples be collected from a discharge resulting from a storm event that is greater than 0.1 inch;
- Provided more flexibility for obtaining four samples a year and avoid unsafe situations when adverse conditions are present;
- Deleted the language “where practicable, the same individual should carry out the collection and examination of discharges for the entire permit term;”
- Modified the inactive and unstaffed sites exemption so that it is only applicable when “there are no industrial materials or activities exposed to stormwater;” and
- Modified the substantially identical outfall exception to clarify that, if possible, visual assessments of such outfalls must be made on a rotating basis so as to cover all outfalls over the course of the permit term.

VII.C. Comprehensive Facility Inspections (Part 4.3)

The MSGP 2010 requires that permittees conduct comprehensive facility inspections (CFI) at least once a year for the entire permit term. The CFI is intended to be more thorough and detailed than the quarterly routine inspections. EPA's annual cycle for CFIs commences on the issuance date of MSGP 2008 permit (i.e., September 28, 2008). ADEQ changed the inspection cycle for conducting the annual CFI to occur not less than 6 months after the previous inspection recognizing that facilities obtain coverage at different times over the course of the permit and to address situations where permittees file for coverage soon after a CFI was conducted under the MSGP 2000. This also allows permittees with multiple sites who must schedule CFIs for their respective facilities greater flexibility in scheduling several sites together. Other language clarifies that should the permit be administratively extended, these inspection requirements continue to apply. Also, the permit provides a one-time waiver for facilities that obtain permit coverage less than three months before the end of one of these inspection periods to allow new permittees more time to fully assess the adequacy of their stormwater control measures.

CFIs may be conducted simultaneously with other site inspections (such as with the routine facility inspection described in permit section 4.1), provided the scope is sufficient to address the minimum requirements of the CFI. Qualified personnel must conduct inspections, and the inspection team must include at least one member of the Pollution Prevention Team. The permit recognizes that only one person may be conducting the inspections, but that individual must be a member of the Pollution Prevention Team and a qualified person. Qualified personnel are those who possess the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility, and who can also evaluate the effectiveness of controls selected. Permittees may hire outside contractors to perform these inspections; however, signature and certification of inspection reports must be by a duly authorized representative of the facility, as defined in Subsection 11 of Appendix B.

Operators must take note that CFIs are not the same as routine facility inspections. Routine facility inspections (Part 4.1) are required more frequently and are less formal evaluations of the facility's exposed industrial activities. CFIs, as the term implies, require a much more in-depth review of the site and all operations, because they relate to stormwater management and the requirements of the permit.

The CFI must cover all areas of the facility affected by the requirements in the permit including areas where industrial materials or activities are exposed to stormwater, stormwater control measures used to comply with the effluent limitations and water quality-based requirements in the permit, and areas where any leaks, spills, or other unauthorized discharge may have occurred in the last 3 years. The Annual Report Form is recommended as a template for use by all permittees when performing these inspections even though only dischargers to impaired or OAWs are required to file the form with ADEQ each year. The Annual Report Form focuses on assessments at each outfall and the areas of the facility that may contribute stormwater discharges associated with industrial activity to that outfall. The permit identifies the specific activities that may occur at the facility that are to be inspected. Also, the CFI must include observation of stormwater control measures used to meet permit requirements to assess the adequacy of these control measures, including any measures in need of maintenance, repair, or replacement or where additional controls are needed.

The results of each CFI must be documented in a report signed and certified by an authorized company official in accordance with Subsection 11 of Appendix B of the permit. All

permittees shall document the findings of each CFI and maintain this documentation on-site with the SWPPP. Facilities that discharge to or within 2.5 miles of an impaired water or OAW are required to file an Annual Report to ADEQ within 45 calendar days of conducting the CFI consistent with Part 7.2 of the permit. In addition to documenting findings of the assessment and observations described above, the report must also include basic inspection information (e.g., inspectors, date, and AZPDES permit number), must certify if the facility is in compliance with the permit, and must describe any corrective action initiated or completed during the reporting period or required as a result of the inspection.

Under the MSGP 2000, ADEQ received nothing more than the NOI for the majority of permittees during the 5-year permit term. To increase accountability and oversight, ADEQ believes it is important that it receive periodic reports from dischargers to impaired or OAWs indicating that they are actively implementing their stormwater management programs, maintaining their control measures, and complying with the terms and limits in the permit to protect Arizona's impaired waters. ADEQ did not change the specific requirements associated with conducting annual inspections but did provide further clarification in the permit on what is to be assessed during these inspections. To assist permittees with documenting the results of these inspections, ADEQ strongly recommends that permittees use the Annual Report Form as a template to both conduct and report the results of their comprehensive facility inspections. As discussed above, dischargers to impaired or OAWs must submit CFIs with their Annual Report to the Department.

VIII. Stormwater Pollution Prevention Plan (SWPPP) (Part 5)

Part 5 of the permit describes the preparation and documentation requirements of the SWPPP and its availability to the public. To be covered under the permit, the discharger must prepare a SWPPP for the facility before submitting a Notice of Intent (NOI). The SWPPP, together with the additional documentation requirements (see Part 5.4 of the permit), is intended to document the selection, design, installation, and implementation (including inspection, maintenance, monitoring, and corrective action) of control measures being used to comply with the requirements set forth in Part 2.2. The SWPPP documents information on how the permittee intends to comply with the requirements (including inspection, maintenance, evaluation and monitoring, requirements) contained elsewhere in the permit.

There were no material changes to this part. Minor changes were made to conform to other changes in the permit and make it internally consistent. For example: in Part 5.1.2, the site description requirements in the facility's SWPPP must include the items in EPA's permit and, in addition, include the location of drywells on the site map (a drywell is a control measure) and a list with their registration number(s); the location of ephemeral and intermittent streams, arroyos and any surface waters receiving stormwater discharges within the immediate vicinity (e.g., 1 mile radius of the facility).

The permit has been reorganized to more clearly distinguish the effluent limitations from the documentation requirements relating to the SWPPP. The SWPPP itself does not contain effluent limitations; rather it constitutes a tool to assist both the permittee and inspectors in ensuring and documenting that the requirements of Part 2.2 are met. This documentation must be kept up-to-date. Where control measures are modified or replaced, for instance in response to a Part 3.1 triggering condition, such changes must be documented with the SWPPP (See Part

5.4). Permittees that fail to develop and maintain an up-to-date SWPPP have violated the permit. This is a recordkeeping violation and is separate and distinct from a violation of any of the other substantive requirements in the permit (e.g., effluent limitations, corrective action, inspections, monitoring, reporting, and sector-specific requirements).

The initial SWPPP must be completed prior to submitting an NOI for permit coverage to ensure that permittees have (1) taken steps to identify all sources of pollutant discharges in stormwater and (2) implemented appropriate control measures to address these discharges in advance of permit coverage. Part 5.1 of the permit contains most of the required elements to be documented in the SWPPP; however, sector-specific requirements are also included in Part 8 of the permit.

Generally, permittees must document the following: (1) the establishment of a stormwater pollution prevention team; (2) a description of the site; (3) summary of potential pollutant sources; (4) description of control measures; and (5) monitoring and inspection procedures (including schedules).

For permittees covered under a previous MSGP, their existing SWPPP must be reviewed and modified, as necessary, to comply with the MSGP 2010.

VIII.A. Contents of the Facility's SWPPP (Part 5.1)

The SWPPP prepared under the permit must address specific requirements. The MSGP 2010 clarifies the distinction between SWPPP requirements and control measures. In the MSGP 2000 the SWPPP documentation requirements and control measures were combined into one section. This led to confusion over what was a documentation requirement and what was a control measure. The Department believes separating the control measures (Part 2.1) and the SWPPP requirements (Part 5) clarifies the distinction between them.

Permittees may choose to reference other documents in the SWPPP rather than recreating the same text in the SWPPP; however, when referencing other documents, the permittees are responsible for ensuring their SWPPP and the other documents together contain all the necessary elements for a complete SWPPP, as specified in Part 5.1. In addition, permittees must ensure that a copy of the referenced document is located on-site consistent with the requirement in Part 5.3 of the permit.

For example, program documents such as Spill Prevention, Control and Countermeasure (SPCC) Plans that fully meet the documentation requirements for a SWPPP (e.g., facility inspections that incorporate and document stormwater inspection requirements) will fulfill the relevant provision of the permit. ADEQ strongly recommends that, regardless of whether all required SWPPP components are combined into one document, an index be kept which identifies where individual SWPPP components are addressed.

VIII.A.1. Stormwater Pollution Prevention Team (Part 5.1.1)

Developing a SWPPP requires that a qualified individual or team of individuals be identified as responsible for developing and revising the facility's SWPPP. Additionally, this team is responsible for implementing and maintaining the control measures to meet the requirements of Part 2.2, and taking corrective action where necessary. Inclusion of the team in the plan provides notice to facility staff and management (i.e., those responsible for signing and certifying the plan) of the responsibilities of certain key staff for following through on compliance with the permit's conditions and limits.

Team members should be chosen for their expertise in the relevant departments at the facility to ensure that all aspects of facility operations are considered in developing the plan. The SWPPP must clearly describe the responsibilities of each team member to ensure that each aspect of the plan is addressed. Most permittees will have more than one individual on the team, except for small facilities. The permit requires that team members have ready access to any applicable portions of the SWPPP and the permit.

VIII.A.2. Site Description (Part 5.1.2)

The SWPPP must describe activities, materials, and physical features of the facility that may contribute significant amounts of pollutants to stormwater runoff or, during periods of dry weather, result in pollutant discharges through the municipal separate storm sewers or stormwater drainage systems that drain the facility. The SWPPP must also contain both a general location map of the site that shows the location of the facility in relationship to receiving waters and other geographical features, and a more detailed site map that contains information on facility/site characteristics that affect stormwater runoff quality and quantity. For areas of the facility that generate stormwater discharges with a reasonable potential to contain significant amounts of pollutants, the map must indicate the probable direction of stormwater flow and the pollutants likely to be in the discharge. Flows with a significant potential to cause soil erosion also must be identified. The site map must also include locations of: existing structural control measures; receiving waters; stormwater conveyances, inlets and outfalls; potential pollutant sources; past significant spills or leaks; stormwater monitoring points; municipal separate storm sewer systems; and locations and sources of run-on to the operator's site (see permit language for complete list of required items). To improve readability of the map, some detailed information may be kept as an attachment to the site map and pictures may be included as deemed appropriate. A detailed site description such as this assists permittees in subsequent efforts to identify and set priorities for the selection, design, and implementation of measures taken to meet the requirements of Part 2.2 and in identifying necessary changes in materials, materials management practices, or site features.

VIII.A.3. Summary of Potential Pollutant Sources (Part 5.1.3)

The permit requires permittees to identify potential sources of pollutants in stormwater resulting from exposure of industrial activities to stormwater. Identification of sources of pollutants in stormwater is critical for selecting source control practices at the site necessary for meeting permit limits. These data may be useful for facility operators to identify potential pollutants of concern on-site through a comprehensive assessment of existing conditions and available information.

In addition, permittees must document in their SWPPP any allowable non-stormwater discharges that are released. The permit and 40 CFR 122.26(b)(14) define "stormwater discharges associated with industrial activities" to include, but not be limited to: stormwater discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at part 401 of this chapter); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to stormwater. *The*

term “stormwater discharges associated with industrial activity” excludes 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 stormwater drained from the above described areas.

Additionally, the term “material handling activities” is defined in the permit to include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product.

Part 5.1.3 is only applicable to those parts of the site for which the permittee is covered under the permit. For example, a site that discharges stormwater to an area of the site covered by a different AZPDES permit, is not required to identify the specific activities occurring in that area. ADEQ does expect permittees to clearly identify those areas of the site and describe why they need not be covered under the permit.

Information provided in this section of the SWPPP helps facility operators to identify potential pollutants of concern on-site through a comprehensive assessment of existing conditions and available information. When identifying potential pollutant sources at the site, permittees must consider industrial stormwater from the following sources:

Activities in the Area (Part 5.1.3.1). This description must include a list of the industrial activities at the facility, including any co-located industrial activities that may be exposed to stormwater.

Pollutants (Part 5.1.3.2). For each of the industrial activities described above, operators must document the associated pollutants or pollutant constituents (e.g., biochemical oxygen demand, suspended solids). The pollutant list must include all significant materials that have been handled, treated, stored or disposed, and that have been exposed to stormwater in the 3 years prior to the date the permittee prepares or amends its SWPPP as well as any additional significant materials that the permittee plans to use during the life of the permit. Permittees are encouraged to identify any additional significant materials that are planned for use during the life of the permit. Such identification is critical for planning purposes when selecting and installing control measures. It also eliminates the need to update the SWPPP every time a new material, that could be a potential pollutant, is brought on site; permittees can incorporate these future plans into the existing SWPPP document as part of the initial SWPPP development.

40 CFR 122.26(b)(12) defines “significant materials” as including but not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the permittee is required to report pursuant to section 313 of title III or SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges.

CERCLA section 101(14) defines “hazardous substance” to include: (A) any substance designated pursuant to section 311(b)(2)(A) of the Federal Water Pollution Control Act (also known as the Clean Water Act (CWA)); (B) any element, compound, mixture, solution, or substance designated pursuant to section 102 of CERCLA; (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (also known as the Resource Conservation and Recovery Act or RCRA); (D) any toxic pollutant listed under CWA section 307(a); (E) any hazardous air pollutant listed under section 112 of the Clean Air Act; and (F) any imminently hazardous chemical substance or mixture with respect to

which the Administrator has taken action pursuant to section 7 of the Toxic Substances Control Act. The list of CERCLA hazardous substances is provided in 40 CFR 302.4.

Spills and Leaks (Part 5.1.3.3). The SWPPP must include a list of any significant spills and leaks of pollutants that occurred in the 3 years prior to the date the SWPPP was developed or amended. New owners of existing facilities should, to the extent practicable, identify any significant spills or leaks attributable to past owners. Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under section 311 of the CWA (see 40 CFR 110.10 and 40 CFR 117.21) or section 102 of CERCLA (see 40 CFR 302.4). Significant spills may also include releases of materials that are not classified as oil or hazardous substances. The list of significant spills and leaks should include a description of the causes of each spill or leak, the actions taken to respond to each release, and the actions taken to prevent similar spills or leaks in the future. This effort will aid operators in developing spill prevention and response procedures and any additional procedures necessary to fulfill the requirements set forth in Part 2.1.1.4 of the permit.

As required in Part 5.4 of the permit, any spills or leaks that occur while covered under the permit must be documented.

Documenting spills does not relieve permittees of any reporting requirements established in 40 CFR 110, 40 CFR 117, and 40 CFR 302, or any other statutory requirements relating to spills or other releases of oils or hazardous substances.

Non-Stormwater Discharges (Part 5.1.3.4). Each SWPPP must include documentation that all unauthorized discharges have been eliminated. The documentation must include the date of any evaluation, and describe any test or evaluation conducted to detect such discharges, the results of those evaluations. Acceptable test or evaluation techniques include dye testing, television surveillance, visual observation of outfalls or other appropriate locations during dry weather, water balance calculations, and analysis of piping and drainage schematics. A combination of these mechanisms may be necessary to complete a thorough evaluation. In general, smoke tests should not be used for evaluating the discharge of non-stormwater to a municipal separate storm sewer as many sources of non-stormwater typically pass through a trap that may limit the effectiveness of the test. When unauthorized discharges are discovered, the documentation must also include a description of how those discharges were eliminated.

Part 5.1.3.4 reflects the modification discussed above in Part 2.1.1.10 of the permit to require elimination of unauthorized discharges prior to being authorized to discharge. This SWPPP provision is simply the documentation requirement for the evaluation and elimination of unauthorized non-stormwater discharges. Monitoring for non-stormwater discharges is addressed during the required benchmark monitoring of the stormwater itself, and to the extent the non-stormwater is a component of the stormwater discharge.

Common unauthorized discharges and common resolutions include: re-routing sanitary wastes (e.g., sinks, drinking fountains, toilets) to sanitary sewer systems; obtaining an appropriate AZPDES permit for cooling water or industrial process wastewater discharges; capping or plugging floor drains; and prohibiting practices such as paint brush washing or wash bucket dumping into storm drain inlets.

Salt Storage (Part 5.1.3.5). The SWPPP must identify any storage piles containing salt, including piles that only contain salt as a portion of the mixture in the pile, used for deicing or

other commercial or industrial purposes. This documentation requirement tracks the Part 2 requirement to implement stormwater control procedures for onsite salt storage.

Sampling Data (Part 5.1.3.6). A summary of all existing data on the quality or quantity of stormwater discharges collected from the facility during the previous permit term must be described in the SWPPP. New dischargers must provide a summary of any available stormwater discharge sampling data they may have, including the methods used to collect the data and the sample collection location. These data may be useful for locating sources and causes of stormwater pollutants.

VIII.A.4. Description of Control Measures (Part 5.1.4)

A permittee must describe in its SWPPP the control measures it has implemented at its site to achieve each of the requirements in Part 2.2, and to address any stormwater run-on that commingles with discharges covered under the permit. The description of the control measures implemented to meet the requirements in Part 2.2 must include a brief explanation of the measures implemented at the site, including how the Part 2.1.1 selection and design considerations were followed. In comparison to the MSGP 2000, the MSGP 2010 clarifies what was always intended to be the scope of this part of the permit, that the operator describes how the control measures in Part 2.1 were selected and implemented to meet the requirements in Part 2.2.

VIII.A.5. Schedules and Procedures – Control Measures (Part 5.1.5.1)

The permit identifies specific information that must be documented in the SWPPP. ADEQ emphasizes that control measures implemented to meet the Part 2 limits must be documented in the SWPPP.

In addition to the description of the on-the-ground control measures implemented to meet the requirements in Part 2.2, the permit requires certain schedules and procedures to be documented in the SWPPP. The following items are specifically identified in the Part 5.1.5 permit language:

Good Housekeeping (see also Part 2.1.1.2). Include a schedule for pickup and disposal of waste materials, along with the frequency of inspections for leaks and conditions of drums, tanks and containers.

Maintenance (see also Part 2.1.1.3). Describe the preventive maintenance program, including how the following will be addressed: regular inspections, testing, maintenance, repair of all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases, and back-up practices in place should a runoff event occur while a control measure is off-line.

Spill Prevention and Response Procedures (see also Part 2.1.1.4). Describe areas and activities that typically pose a high risk for spills including loading and unloading areas, storage areas, process areas, and waste disposal activities and identify corresponding outfalls. Also, describe appropriate material handling procedures, storage requirements, containment or diversion equipment, and spill cleanup procedures that will minimize the potential for spills, or in the event of a spill, enable proper and timely response. Identify which employees are to be trained on proper procedures and requirements and which are responsible for ensuring that appropriate equipment is available to respond to spills.

Employee Training (see also Part 2.1.1.9). Describe how personnel are to be trained and their responsibilities. The SWPPP must include a schedule for conducting this training.

VIII.A.6. Schedules and Procedures – Monitoring and Inspection Procedures (Part 5.1.5.2)

The permit requires permittees to plan and document (in the SWPPP) monitoring and inspection activities in advance of when they are required to be conducted. These documentation provisions will help ensure that appropriate monitoring and inspection procedures consistent with permit requirements are implemented and improve facility compliance with the requirements. For monitoring activities, the permittee must document in the SWPPP information such as locations where samples are to be collected, person(s) or position(s) responsible for collecting those samples, the frequency of sampling and the parameters to be sampled, applicable control values at each sample location, and procedures that will be followed to gather storm event data.

For inspection activities, permittees must document procedures for performing the three types of inspections specified in the permit, namely, routine facility inspections (Part 4.1), visual assessments (Part 4.2), and comprehensive facility inspections (Part 4.3). For each of these types of inspections, the SWPPP must include information such as person(s) or position(s) performing inspections, the inspection schedule, and specific items to be covered by the inspection.

When choosing to use the substantially identical outfall exception in Part 4.2 for visual assessments or Part 6.2 for benchmark monitoring, the operator is required to describe in the SWPPP the locations of each of these outfalls, the general industrial activities conducted in the drainage area of each outfall, the control measures being implemented for each outfall, the exposed materials that are likely to be a significant contributor of pollutants to the stormwater discharge, an estimate of the runoff coefficient of the drainage area, and why the outfalls are expected to discharge substantially identical effluents.

VIII.A.7. Signature Requirements (Part 5.1.6)

The permit requires the permittee to sign and date the SWPPP consistent with procedures detailed in Appendix B, Subsection 11 (standard permit condition for signatory requirements). The requirement is consistent with standard AZPDES permit conditions described in 40 CFR 122.22 and is intended to ensure that the permittee understands its responsibility to create and maintain a complete and accurate SWPPP. The permittee may appoint an authorized representative consistent with the regulations. Therefore, if a facility feels it is more appropriate for a member of the stormwater pollution prevention plan team to sign the documentation, that option is available under the permit. The signature requirement includes an acknowledgment that there are significant penalties for submitting false information.

VIII.B. Required Modifications (Part 5.2)

The permit requires that the SWPPP be updated whenever any of the triggering conditions for corrective action in Part 3.1 occur such that changes to the permittee's control measures are necessary to meet the requirements of Part 2.2 in the permit. The permit requires that the SWPPP be signed and dated by an authorized representative each time it is modified in response to a condition triggering corrective action. This ensures that the SWPPP document is kept up to date. Changes to the SWPPP must be made in accordance with Parts 3.2 and 3.3. The MSGP 2010 consolidates into Part 5.2 several similar requirements of the MSGP 2000.

It is important to note that failure to update the SWPPP in accordance with Part 5.2 is a recordkeeping violation, not a violation of requirements in Part 2.2. For example, if the permittee changes its maintenance procedures, but fails to update its SWPPP to reflect these changes, a recordkeeping violation will result. The permittee must revise its SWPPP to reflect the new maintenance procedures and include documentation of the corrective action (in accordance with Part 4) to return to full compliance with the permit.

VIII.C. SWPPP Availability (Part 5.3)

The permit requires that a copy of the SWPPP be kept at the facility and be immediately available to representatives of ADEQ, EPA, a State, or a local stormwater agency (e.g., MS4 operator) at the time of an on-site inspection or upon request. Part 5.3 also indicates that ADEQ may otherwise request the permittee to submit copies of SWPPP documents with 14 calendar days. The purpose of this requirement is to make the SWPPP available to the public; ADEQ will provide access to the facility's SWPPP with the exception of any qualifying confidential information (as defined in A.R.S. § 49-205). Arizona's Public Records laws (A.R.S Title 39, Chap. 1, Art. 2) allow access to the SWPPP; however, if a member of the public wishes to have access to portions of the permittee's SWPPP, they must first contact ADEQ. Therefore, if any person makes a written request to the Department for access to a copy of the SWPPP, the Department shall request and the permittee shall provide within 14 calendar days, a copy for ADEQ to make available for public review.

The MSGP 2010 makes allowances for the fact that SWPPPs are generally not kept at inactive and unstaffed sites. However, the SWPPP must still be kept up to date and on-site when appropriate routine and comprehensive facility inspections are conducted. Furthermore, the SWPPP must be locally available within the state of Arizona and made available within 48 hours, if requested, when a regulatory inspection is performed by ADEQ, EPA or other Federal or local authority.

VIII.D. Additional Documentation Requirements (Part 5.4)

Part 5.4 includes a list of documents, findings, activities, and information that must be kept with the permittee's SWPPP. Part 5.4 in the permit consolidates all additional documentation requirements into one section is intended to clarify those requirements for permittees. See permit language for details.

ADEQ believes the SWPPP itself should describe the site, the control measures, and the site activities to be performed (see Part 5.1), but activities undertaken to comply with the provisions of the permit are more appropriately compiled separately. Hence, the language, "kept with the SWPPP" used in various places throughout the permit is intentional. The additional documentation requirements are in Part 5.4 of the permit. "Kept with the SWPPP" is intended to clarify that these records are separate from the SWPPP documentation requirements. Instead, these records, which should be kept with the actual SWPPP document, provide documentation of the permittee's compliance with the permit. In general, this documentation requires the signature of the person performing the activity (e.g., inspection, sampling), not an authorized facility representative as specified in Appendix B, Subsection 11.

IX. Analytical Monitoring Program (Part 6)

This part describes monitoring requirements that apply to each outfall discharging stormwater associated with industrial activity. The permit contains a detailed section on

monitoring procedures with follow-up actions if a discharge exceeds a numeric effluent limitation. EPA introduced, and ADEQ adopted the concept of a measurable storm event as any storm event that results in a discharge of stormwater from the facility. The requirement no longer exists that precipitation must measure 0.1 inch, or greater to qualify.

In contrast to the organization of the MSGP 2000, Monitoring (Part 6) has been separated from reporting and recordkeeping requirements (Part 7) and quarterly visual monitoring (renamed visual assessment) relocated to Part 4 (Inspections). Also, corrective actions taken in response to certain monitoring situations (e.g., violates a numeric effluent limitation guideline) were moved to a new section of the permit, Part 3 (Corrective Actions). Follow-up monitoring requirements resulting from any exceedance of an effluent limitation contained in the permit remains in the Monitoring section (Part 6.3).

IX.A. Analytical Monitoring Procedures (Part 6.1)

The permit requires certain permittees to sample and analyze their stormwater discharges as a way to assess the effectiveness of control measures in meeting the effluent limitation guidelines and water quality standards. Analytical monitoring is a means by which to measure the concentration of a pollutant in a stormwater discharge. Analytical results are quantitative and therefore can be used to compare discharge results and to quantify the effectiveness of stormwater control measures, including identifying pollutants that are not being successfully controlled.

Part 6.1 of the permit identifies procedures for collecting samples and identifies where to sample, when to sample, what to sample and how to sample. Many of these requirements are similar to those in the MSGP 2000, but consolidating these requirements in one part of the permit helps to clarify the monitoring requirements.

IX.A.1. Monitored Outfalls (Part 6.1.1.1).

The monitoring requirements in the permit apply to each outfall discharging stormwater associated with industrial activity, unless the permittee qualifies for the substantially identical outfalls exemption as described in this section. The substantially identical outfall provision allows permittees with a means to reduce the number of outfalls that must be sampled and analyzed while still providing monitoring data that are indicative of discharges from each outfall. This may result in a substantial reduction of the resources required for a facility to comply with analytical monitoring requirements.

To be considered substantially identical, outfalls must have generally similar industrial activities, control measures, exposed materials that may significantly contribute pollutants to stormwater, and runoff coefficients of their drainage areas. The MSGP 2010 clarifies that the outfalls can be substantially similar, but do not have to be identical to be eligible for the use of this option. When a permittee believes its facility has two or more outfalls that qualify as substantially identical, the permittee may monitor one of these outfalls and report that the quantitative data also apply to the other substantially identical outfalls. The permittee must also document the location of each of the outfalls and explain why the outfalls are expected to discharge substantially identical effluent, addressing each of the factors to be considered in this determination (industrial activities, control measures, exposed materials and runoff coefficients). Operators do not need advance ADEQ approval for this determination, however, the Department may subsequently determine that outfalls are not substantially identical and require sampling of additional outfalls. Part 6.1.1 clarifies that the allowance for monitoring only one of the

substantially identical outfalls is not applicable to any outfalls with the numeric effluent limitations. The permittee is required to monitor each outfall covered by a numeric effluent limitation guideline as identified in Part 6.2.2.

IX.A.2. Commingled Discharges (Part 6.1.1.2).

If stormwater discharges associated with industrial activity commingle with discharges not authorized by the permit (e.g., unregulated stormwater or other permitted wastewater), then permittees must sample the stormwater discharge before it mixes with the other discharges when practicable. The intent of this provision is to ensure that monitoring results are representative of discharges covered under the permit and not indicative of other discharges from the site. In certain instances, sampling only authorized waste streams may be inappropriate or infeasible, such as when authorized discharges are commingled with other waste streams prior to on-site treatment.

IX.A.3. Monitoring for Allowable Non-Stormwater Discharges (Part 6.1.1.3).

This provision clarifies that permittees are only required to monitor allowable non-stormwater discharges when they are commingled with stormwater discharges associated with industrial activity unless modified by ADEQ.

IX.A.4. Monitoring Periods (Part 6.1.2.1)

Many facilities in Arizona are subject to limited rainfall conditions throughout the year (i.e., the winter wet season or the summer wet season). The climate throughout the state of Arizona is characterized as arid or semi-arid with irregular stormwater runoff. In addition, certain areas of the state experience freezing conditions that may prevent runoff from occurring for extended periods. Therefore, monitoring periods have been adapted accordingly and the section on climates with irregular stormwater runoff has been combined into the section on monitoring periods. Whereas the federal MSGP 2008 requires much of the monitoring to be conducted by calendar quarter or calendar year, ADEQ has established a winter and summer "wet season" for monitoring in the permit. ADEQ has replaced EPA's quarterly benchmark monitoring schedule with one that adapts to Arizona's summer and winter wet seasons.

The monitoring requirement begins immediately after authorization to discharge received by permittee. ADEQ recognizes the variability of rainfall in the state and, to ensure that all storm events fall into one of the two rainy seasons for the purposes of MSGP monitoring, the Department has defined monitoring seasons in the permit as follows:

Summer wet season:	June 1 – October 31
Winter wet season:	November 1 – May 31

This definition applies statewide. The frequency for MSGP stormwater sampling in the permit is at least twice each wet season (summer and winter) from each monitoring location. If four samples cannot be collected within the first year of receiving coverage, the permittee is required to continue performing benchmark monitoring until four samples are collected.

The term 'wet season' includes areas of the state where freezing conditions exist that prevent runoff from occurring for extended periods. In areas where freezing conditions exist, the required monitoring and sample collection may be distributed during seasons when precipitation runoff, either as melting snow or rain mixed with melting snow, occurs (see the following

section for further discussion). The permittee is still required to collect the required number of samples.

The MSGP 2000 required quarterly benchmark monitoring, and did not recognize arid or semi-arid climates or define monitoring periods according to wet seasons. Precipitation or runoff patterns are such that quarterly sampling is not representative of Arizona's arid and semi-arid climates. EPA introduced a new concept in the federal MSGP 2008, "climates with irregular stormwater runoff". Its purpose is to provide flexibility to parts of the country where precipitation or runoff patterns are such that quarterly sampling is not representative of when stormwater discharges are likely to occur. The MSGP 2010 uses the concept of irregular stormwater runoff by establishing 2 wet seasons. This is in recognition that precipitation in Arizona tends to be concentrated in 2 distinct seasons and, therefore, quarterly sampling is not appropriate.

IX.A.5. Measurable Storm Events (Part 6.1.2.2).

The permit defines a measurable storm event as an event that results in a discharge from the permitted facility. The MSGP 2000 required that a storm event have at least a 0.1 inch magnitude and be at least 72 hours (3 days) after the last measurable event. The MSGP 2010 retains the same requirements as the MSGP 1995 and the MSGP 2000 regarding the interval between qualified rain events, but a specific storm magnitude (i.e., 0.1 inches or greater) is no longer required. Samples must be collected from the discharge resulting from a storm event that occurs at least 72 hours (3 days) after a previous measurable storm event. The 72-hour (3-day) requirement may be waived by the permittee where the permittee documents that less than a 72-hour (3-day) interval is representative for local storm events during the season when sampling is being conducted.

By defining a storm event as one that *results in discharge*, rather than prescribing a minimum magnitude as the permit did in prior versions, it affords the permittee flexibility to sample during any storm event that produces a discharge, rather than having to ensure that minimum magnitude is reached. The purpose of redefining the measurable event is to capture and characterize actual stormwater discharge.

A provision for monitoring snowmelt has been added to the permit. Many facilities covered by the MSGP 2010 are located in colder regions of the state and may have extended periods of freezing temperatures and snow events that do not meet the definition of a measurable storm event. The 72-hour (3-day) requirement does not apply to snowmelt as the actual discharge is not clearly tied to a specific snow event (i.e., may be the accumulation from multiple events). The permittee record must record the date the snowmelt sample was collected.

IX.A.6. Sample Type (Part 6.1.2.3).

The permit specifies that a minimum of one grab sample must be taken from the measurable storm event being monitored. This allows facilities to make accurate comparisons of monitoring results to the corresponding benchmark, effluent limitation or water quality standard to determine whether additional action may be needed to reduce concentrations of pollutants detected in stormwater discharges. The grab sample must be taken during the first 30 minutes of the discharge, except for snowmelt monitoring which has no 30 minute requirement. If more than one grab sample or a composite sample is collected, only those samples collected during the first 30 minutes of discharge are to be used for performing any necessary analyses. If the collection of a grab sample during the first 30 minutes is impractical, a grab sample can be taken

as soon as practicable after the first 30 minutes, but the permittee must document and keep with the SWPPP an explanation of why a grab sample during the first 30 minutes was impractical. The Department expects that the permittee will rectify such a situation if a pattern of late sampling is developing, by moving the sample location.

A sample is required during the first 30 minutes, because the highest pollutant concentrations generally occur during these first flush events. The first 30 minutes of the discharge is also the time when receiving stream flows are the lowest during wet weather events and thereby presents the greatest potential pollutant impacts to aquatic species.

Grab samples of snowmelt discharge that have been exposed to industrial activities, materials storage, or materials handling areas are to be collected from each outfall for characterization, but they do not have to be collected within 30 minutes of discharge since (1) runoff typically does not occur during a snow event (2) collecting a snowmelt sample within 30 minutes of commencement of discharge is impractical, and (3) the “first flush” effects of snowmelt are not as well defined.

IX.A.7. Adverse Conditions (Part 6.1.2.4).

When adverse weather conditions make sampling dangerous, the permittee may postpone storm event monitoring until the next runoff event. This provision applies to serious weather conditions such as: lightning, flash flooding, and high winds or other unsafe conditions that result from violent weather, such as downed power lines in the immediate area where sampling would take place. This provision should not be used as an excuse for not conducting sampling under conditions associated with more typical storm events. Adverse weather conditions do not exempt the permittee from the requirement to file a benchmark monitoring report in accordance with the corresponding reporting period. In many cases, sampling during a subsequent non-hazardous storm event may still be possible during the reporting period. Where this is not possible, operators are still required to report the inability to monitor indicating the basis for not sampling during the reporting period. This provision applies to all monitoring requirements of the permit.

IX.A.8. Sampling and Analysis Plan (Part 6.1.3)

ADEQ reorganized all of the analytical sampling and monitoring requirements in the permit under a new subsection entitled Sampling and Analysis Plan (SAP). For the required monitoring, the SWPPP must contain a SAP either as a separate section or as an appendix to the SWPPP. SAPs are not required in SWPPPs for inactive and unstaffed sites because benchmark monitoring at these sites has been waived. The contents of the SAP must include

1. Sample collection, preservation, tracking, and handling information;
2. Monitoring equipment;
3. A description of analytical methods; and
4. Records.

All SAPs must have the following general information. If this information is already available with the SWPPP, it may be referred to rather than duplicated.

- Locations where samples are collected, including any determination that two or more outfalls are substantially identical;

- The name(s) and title of the person(s) who will perform the monitoring;
- A map showing the segments or portions of the receiving water that are most likely to be impacted by the discharge of pollutant(s);
- Schedules for monitoring at the facility;
- Water quality parameters/pollutants to be sampled and the frequency of sampling for each parameter;
- An identification of the pollutant(s) of concern based on the most recent 305(b)/303(d) listing or other information available;
- A description of potential source(s) of this pollutant(s) from the project, if any;
- Any numeric control values (benchmarks, effluent limitations guidelines, TMDL-related requirements, or other requirements) applicable to discharges from each outfall;
- Procedures (e.g., responsible staff, logistics, laboratory to be used, etc.) for gathering storm event data; and
- The citation and description of the sampling protocols to be used.

Sample Collection, Preservation, Tracking, and Handling Information (Part 6.1.3.1)

The SAP shall contain written procedures for sample collection, preservation, tracking, and handling, including the following:

1. Identify water quality parameters and pollutants to be sampled including any pollutants of concern in accordance with Parts 6.2.3 and 6.2.4;
2. Identification of the required sample analyses and associated analytical methods (analytical laboratory and field analyses);
3. Sample collection procedures outlining equipment and containers, calibration procedures field note taking, preservation procedures, etc.;
4. Sample tracking procedures using chain-of-custody (COC) forms. The COC shall include, at a minimum, sampler's name(s), phone number, date and time of sample collection, sample identification, requested analyses, and project name or number. The COC forms shall be included as part of the SWPPP;
5. Transporting and shipping samples for laboratory analyses in a manner that minimizes destruction of the sample or otherwise compromises sample integrity. Samples shall be provided to the analytical laboratory in a timeframe not exceeding analytical method hold times;
6. Designating and training personnel to collect, maintain, and ship samples in accordance with the above sample protocols and good laboratory practices.

Monitoring Equipment (Part 6.1.3.2)

Permittees are expected to calibrate, operate and maintain their monitoring equipment in accordance with manufacturer's recommendations.

Analytical Methods (Part 6.1.3.3)

Except for parameters that require analysis at the time of sample collection all analyses must be conducted by laboratories licensed by the Arizona Department of Health Services (ADHS) and must be conducted according to test procedures specified in 40 CFR 136. Parameters that require analysis at the time of sample collection include flow, dissolved oxygen, pH, temperature, and total residual chlorine, analyses for these parameters do not have to be performed using 40 CFR 136 approved methods, but methods used must be approved by ADHS or ADEQ. A field analysis of turbidity may be conducted if the permittee has sufficient capability (i.e., qualified and trained employees, properly calibrated and maintained field instruments, etc.) to properly perform the field analysis.

Records (Part 6.1.3.4)

The permittee must retain records of all stormwater monitoring information and reports as part of the SWPPP in accordance with Part 7.5. In addition to the requirements of Appendix B, Subsection 11 of the permit, these records shall include:

1. The date, exact place and time of sampling or measurements;
2. The name and title of the qualified person performing the visual and analytical monitoring and any related measurements;
3. The date(s) the analyses were performed;
4. The analytical techniques or methods used;
5. The results of such analyses; and
6. The response(s) taken to minimize pollutants in discharge.

IX.B. Required Monitoring (Part 6.2)

The organization of the monitoring requirements in the MSGP 2010 differs from past permits. Monitoring requirements were consolidated into one section in order to more clearly and concisely present these monitoring requirements. Visual assessments, previously part of the monitoring requirements, is now included in the inspections section (see Part 4).

The MSGP 2010 includes benchmark, effluent limitations and impaired waters monitoring similar to that of the EPA permit. In addition, the permit requires additional monitoring at facilities that receive authorization to discharge to outstanding Arizona waters or that ADEQ requires additional monitoring (Part 6.2.4). Four types of analytical monitoring are required, one or more of which may apply to the facility's discharge:

- Benchmark monitoring (see Part 6.2.1);
- Effluent limitations monitoring (see Part 6.2.2);
- Impaired waters monitoring (see Part 6.2.3); and
- Additional monitoring as required by ADEQ (see Part 6.2.4).

The permit provides that if any of these monitoring requirements overlap, permittees are authorized to use a single sample to comply with those overlapping requirements. Monitoring frequency at a facility, or an individual outfall, depends upon whether one or more of the above four types of monitoring applies.

This Fact Sheet describes the monitoring requirements, the rationale for changes from the MSGP 2000 and ADEQ’s rationale for deviations from EPA’s 2008 permit upon which the MSGP 2010 is based. Table 4 below summarizes analytical monitoring (benchmark monitoring and effluent limitation guidelines) for each sub-sector. Refer to Part 8 of the permit for details.

Table 4. Summary of Industry Sectors/Sub-Sectors Subject to Analytical Monitoring

Industry sector	Industry sub-sector	Required parameters for analytical monitoring
A	General Sawmills and Planing Mills (SIC 2421)	Chemical Oxygen Demand (COD), Total Suspended Solids (TSS), Total Zinc
A	Wood Preserving (SIC 2491) (only applies to facilities that use chromium/arsenic formulations)	Total Arsenic, Total Copper
A	Wet Decking Discharges at Log Storage and Handling Areas (SIC 2411)	pH, Debris (woody material such as bark, twigs, branches, heartwood, or sapwood)
A	Hardwood Dimension and Flooring Mills; Special Products Sawmills, not elsewhere classified; Millwork, Veneer, Plywood and Structural Wood; Wood Containers; Wood Buildings and Mobile Homes; Reconstituted Wood Products; and Wood Products Facilities not elsewhere classified (SIC 2426, 2429, 2431-2439 (except 2434), 2448, 2449, 2451, 2452, 2593, and 2499)	COD, TSS
B	Paperboard Mills (SIC 2631)	COD
C	Phosphate Subcategory of the Fertilizer Manufacturing Point Source Category (40 CFR § 418.10) (applies to precipitation runoff, that during manufacturing or processing, comes into contact with any raw material, intermediate product, finished product, by-products or waste product (SIC 2874))	Total Phosphorus (as P), Fluoride
C	Industrial Inorganic Chemicals (SIC 2812-2819)	Total Recoverable Aluminum, Total Recoverable Iron, Nitrate + Nitrite N
C	Soaps, Detergents, Cosmetics, and Perfumes (SIC 2841-2844)	Nitrate + Nitrite N, Zinc
C	Agricultural Chemicals (SIC 2873-2879)	Nitrate + Nitrite N, Total Recoverable Lead, Total Recoverable Iron, Total Recoverable Zinc, Phosphorus
C	Plastics, Synthetics, and Resins (SIC 2821-2824)	Total Recoverable Zinc
D	Asphalt Paving and Roofing Materials (SIC 2951, 2952)	TSS

Industry sector	Industry sub-sector	Required parameters for analytical monitoring
D	Discharges from areas where production of asphalt paving and roofing emulsions occurs (SIC 2951, 2952)	TSS, Oil and Grease, pH
E	Clay Products Manufacturers (SIC 3245-3259, 3261-3269)	Total Recoverable Aluminum
E	Concrete and Gypsum Product Manufacturers (SIC 3271-3275)	TSS, Total Recoverable Iron
E	Cement Manufacturing Facility, Material Storage Runoff: Any discharge composed of runoff that derives from the storage of materials including raw materials including raw materials, intermediate products, finished products, and waste materials that are used in or derived from the manufacture of cement.	TSS, pH
F	Steel Works, Blast Furnaces, and Rolling and Finishing Mills (SIC 3312-3317)	Total Recoverable Aluminum, Total Recoverable Zinc
F	Iron and Steel Foundries (SIC 3321-3325)	Total Recoverable Aluminum, TSS, Total Recoverable Copper, Total Recoverable Iron, Total Recoverable Zinc
F	Non-Ferrous Rolling and Drawing (SIC 3351-3357)	Total Recoverable Copper, Total Recoverable Zinc
F	Non-Ferrous Foundries (SIC 3363-3369)	Total Recoverable Copper, Total Recoverable Zinc
K	Hazardous Waste Treatment Storage or Disposal (Industrial Activity Code "HZ") (applies only to stormwater discharges associated with industrial activity from such activities other than contaminated stormwater discharges from landfills subject to the numeric effluent limitations set forth at 40 CFR Part 445, Subpart A)	Ammonia, Total Recoverable Magnesium, COD, Total Recoverable Arsenic, Total Recoverable Cadmium, Total Cyanide, Total Recoverable Lead, Total Recoverable Mercury, Total Recoverable Selenium, Total Recoverable Silver.
K	Hazardous Waste Treatment Storage or Disposal (Industrial Activity Code "HZ") (applies only to discharges subject to 40 CFR Part 445, Subpart A)	Biochemical Oxygen Demand (BOD ₅), TSS, Ammonia, Alpha Terpineol, Aniline, Benzoic Acid, Naphthalene, p-Cresol, Phenol, Pyridine, Arsenic (total), Chromium (total), Zinc (total), pH
L	Landfills, Land Application Sites, and Open Dumps (Industrial Activity Code "LF")	TSS

Industry sector	Industry sub-sector	Required parameters for analytical monitoring
L	Landfills, Land Application Sites, and Open Dumps (Industrial Activity Code “LF”) except Municipal Solid Waste Landfill Areas Closed in Accordance with 40 CFR 258.60	Total Recoverable Iron
L	Landfills (Industrial Activity Code “LF”) Subject to the Requirements of 40 CFR Part 445, Subpart B	BOD ₅ , TSS, Ammonia, Alpha Terpineol, Benzoic Acid, p-Cresol, Phenol, Zinc (total), pH
M	Automobile Salvage Yards (SIC 5015)	TSS, Total Recoverable Aluminum, Total Recoverable Iron, Total Recoverable Lead
N	Scrap Recycling (SIC 5093)	Total Recoverable Copper, Total Recoverable Aluminum, Total Recoverable Iron, Total Recoverable Lead, Total Recoverable Zinc, TSS, COD.
O	Steam Electric Generating Facilities (Industrial Activity Code “SE”) (only applies to facilities that use or store coal)	Total Recoverable Iron
Q	Water Transportation Facilities (SIC 4449, 4489, 4493, 4499)	Total Recoverable Aluminum, Total Recoverable Iron, Total Recoverable Lead, Total Recoverable Zinc
S	Facilities at airports that use more than 100,000 gallons of glycol-based deicing/anti-icing chemicals and/or 100 tons or more of urea on an average annual basis: monitor ONLY those outfalls from the airport facility that collect runoff from areas where deicing/anti-icing activities occur (SIC 4512-4581)	BOD ₅ , COD, Ammonia, pH
U	Grain Mill Products (SIC 2041-2048)	TSS
U	Fats and Oils Products (SIC 2074-2079)	BOD ₅ , COD, Nitrate + Nitrite N, TSS
Y	Tires and Inner Tubes; Rubber Footwear; Gaskets, Packing, and Sealing Devices; Rubber Hose and Belting; and Fabricated Rubber Products, Not Elsewhere Classified (SIC 3011-3069 (Rubber Products))	Total Recoverable Zinc
AA	Fabricated Metal Products Except Coating (SIC 3411-3471, 3482-3499, 3911-3915)	Total Recoverable Aluminum, Total Recoverable Iron, Total Recoverable Zinc Nitrate + Nitrite N
AA	Fabricated Metal Coating and Engraving (SIC 3479)	Total Recoverable Zinc, Nitrate + Nitrite N.

IX.B.1. Benchmark Monitoring (Part 6.2.1).

Benchmark monitoring is required in the MSGP 2010. A benchmark is a numeric monitoring requirement where discharges must be sampled to determine whether they meet a certain level of pollutant(s) in the discharge. Benchmark monitoring requirements described in Part 6.2.1 of the permit require permittees to collect stormwater samples for laboratory chemical analyses. Benchmarks are not effluent limitations, and exceedances of benchmarks are not permit violations. Rather, exceedance of a benchmark is an indicator to the operator that there may be a problem with his/her control measures, or the discharge may be adversely affecting water quality.

If a benchmark is exceeded, generally, the enforceable requirement is for the discharger to contact the permitting authority, examine its BMPs, and implement additional controls, if necessary. A benchmark requires similar types of site planning, employee education, firm resources, monitoring and sampling, design, installation and maintenance of [control measures], and application of other passive treatment technologies as are necessary to meet a numeric limitation.

The basic framework for benchmark monitoring established in the 1995 and 2000 permits has not changed. Except as discussed below, ADEQ adopted EPA's changes to the benchmark monitoring requirements, such as downward adjustments to many of the benchmarks to enhance consistency with published water quality criteria. Also, to provide additional protection for sensitive aquatic species, new provisions were adopted for adjusting benchmarks based on hardness for certain metals.

During development of MSGP 2000, EPA received substantial public comment on the value of benchmark monitoring. EPA responded to those comments, in part, by indicating that "considering the small number of samples required per monitoring year (four), and the vagaries of stormwater discharges, it may be difficult to determine or confirm the existence of a discharge problem" EPA acknowledged that "when viewed as an indicator, analytic levels considerably above benchmark values can serve as a flag to the operator" that his/her control measures "need to be reevaluated and that pollutant loads may need to be reduced." Alternatively, the Agency indicated that analytic levels below or near benchmarks can confirm to the operator that his/her control measures are doing their intended job. EPA also stated that "there is presently no alternative that provides stakeholders with an equivalent indicator of program effectiveness." (see 65 Fed. Reg. 64796, October 20, 2000). This response, from the MSGP 2000, continues to represent EPA's and ADEQ's thinking regarding the appropriate use of analytical monitoring. The permit strengthens the benchmark monitoring requirements by requiring permittees to document any changes to their control measures that are triggered by benchmark exceedances and to make modifications where these measures are inadequate.

For their 2008 permit EPA prepared an analysis of benchmark data collected under the 1995 and 2000 MSGPs, to evaluate the effectiveness of management practices on an industry sector basis and to evaluate the need for changes in the monitoring protocols. This analysis is available memorandum entitled "Review of Discharge Monitoring Report Data from the 2000 NPDES Industrial Stormwater Permit Program" on ADEQ's at website <http://www.azdeq.gov/environ/water/permits/stormwater.html>. The report indicated that available analytic monitoring data showed exceedances of benchmark values for many facilities.

To further EPA's understanding of the links between stormwater pollutant discharges and ambient water quality, and to assess the state of the science of stormwater management, the

Agency commissioned a study with the National Research Council (NRC) beginning in July 2006. The NRC report was completed in September 2009 and is available for purchase from EPA. A pre-publication copy is available for download on ADEQ's MSGP web site at <http://www.azdeq.gov/environ/water/permits/stormwater.html>. The study considered municipal, construction, and industrial stormwater, with special attention paid to those eight to ten industrial sectors felt to be of highest priority in terms of pollutant discharges.

IX.B.1.a. Changes to Applicability of Benchmark Monitoring Requirements (Part 6.2.1.1)

As discussed above, benchmark monitoring continues to be a requirement of the MSGP 2010; however, this framework has been further developed to enhance its usefulness in identifying potential water quality concerns and opportunities to improve the effectiveness of the measures taken to meet the effluent limits.

EPA's analysis provided the basis for the following decisions regarding benchmark monitoring requirements in EPA's MSGP 2008:

- Retaining TSS benchmark at 100 mg/L
- Application of benchmarks and numeric effluent limitations for the same pollutant
- Lowering ammonia benchmark
- Adopting hardness-dependent benchmarks for certain metals
- Updating certain other benchmarks, and
- Allowing for consideration of natural background pollutant levels.

ADEQ further modified benchmark monitoring requirements in ADEQ's MSGP 2010 by reserving benchmark monitoring for Total Suspended Solids (TSS) for Sectors D, E and L. These sectors are required to monitor and report TSS values on Discharge Monitoring Reports forms (DMRs), but the benchmark value has been reserved. The benchmark value for Nitrate plus Nitrite Nitrogen for all affected sectors in Part 8 has also been reserved, but monitoring is still required and the results must be reported on DMRs. Note that the absence of a numeric benchmark does not eliminate the need to implement control measures to minimize the discharge of these pollutants.

EPA's discussion of each of the above decisions regarding benchmark monitoring follows.

IX.B.1.a.i. Retaining TSS Benchmark at 100 mg/L.

Proper selection, design, installation, and implementation of control measures can reduce TSS concentrations in many cases. For example, good housekeeping practices, such as sweeping or diverting stormwater flows, can reduce TSS concentrations in stormwater. In other cases, TSS can be reduced by control measures such as bioretention, settling mechanisms, and other types of treatment devices. A Tetra Tech, Inc. study (2006¹), commissioned by EPA, found that most facilities have been able to meet the 100 mg/L benchmark in MSGP 2000. In many cases, reported TSS concentrations in industrial stormwater runoff did not exceed the MSGP 2000 benchmark for TSS of 100 mg/L. In an analysis of discharge monitoring report (DMR) data

¹ Tetra Tech, Inc. 2006. Review of Discharge Monitoring Report Data From the 2000 NPDES Industrial Stormwater Permit Program. Technical Memorandum to Jack Faulk, U.S. Environmental Protection Agency. Tetra Tech, Inc., Clemson, SC, and Fairfax, VA.

from more than 775 facilities covered nationwide by the MSGP 2000, approximately 63 percent of the TSS samples met the benchmark. As stated above, ADEQ also retained the TSS benchmark value of 100 mg/L for all sectors except D, E, and L. A review of TSS levels in Arizona streams indicate levels of 100 would be difficult to obtain for larger sites with areas of disturbed land.

EPA's 2008 permit retained the TSS benchmark at the level of 100 mg/L consistent with previous permits. The MSGP 2010 generally retains this value only for the non-mining sectors, with the exception of Sectors D, E and L. EPA's decision to retain the TSS benchmark for all affected sectors is based on a number of factors, including recent scientific literature supporting this benchmark concentration and EPA's best professional judgment. In ADEQ's opinion, reduction in TSS loading improves aquatic habitat and water.

IX.B.1.a.ii. Application of Benchmarks and Numeric Effluent Limitations for the Same Pollutant.

Several sectors have both benchmarks and effluent limitations guidelines that apply to the same pollutant. The MSGP 2010 is modified from the MSGP 2000 to provide a clearer delineation of these two sets of requirements and their relationship to each other. Specifically, five sectors in the permit have both benchmarks and effluent limitations guidelines for a specific pollutant: TSS in Sectors D, E, L, and O and ammonia and arsenic in Sector K. Benchmarks apply to the entire stormwater discharge associated with industrial activity from the facility whereas the effluent limitation guidelines only apply to the specific activity identified by the national effluent limitation guideline. For example, in Sector D, effluent limitations guidelines apply only to stormwater runoff from asphalt emulsion facilities while the benchmarks apply to all stormwater discharge associated with industrial activities at the site. Benchmarks and effluent limitations guidelines are separated into different tables to clarify the difference between the applicability of these two sets of requirements.

IX.B.1.a.iii. Lowering Ammonia Benchmark.

The ammonia benchmark has been lowered from 19 mg/L to 2.14 mg/L based on comments received from the US Fish and Wildlife Service and the US National Marine Fisheries Service (the Services). These comments were regarding the potential impacts of the MSGP on federally-listed endangered and threatened species and their critical habitat. The Services commented that the proposed 19 mg/L benchmark would not adequately protect certain endangered species. EPA included the benchmark of 19 mg/L in both the 1995 and 2000 permits based on the assumption that the majority of waters would have a pH of about 7.5 or less. Under most existing water quality standards, the pH is expected to be between 6.0 and 9.0. Streams and reservoirs that have high levels of photosynthesis will likely have higher pH. In calculating a revised benchmark, EPA assumed a maximum pH of 8.5 in the receiving stream, which yielded an acute freshwater criterion for ammonia of 2.14 mg/L. This change affects two sectors: Sector K (Hazardous Waste Treatment Storage or Disposal Facilities) and Sector S (Air Transportation Facilities).

Based on past monitoring results the majority of facilities will not exceed this revised benchmark. Ammonia discharge data from the MSGP 2000 DMR data for Sector K facilities revealed that only 4 in 47 data points exceeded the 2.14 mg/L. However, some Sector S facilities may have to implement additional measures to further minimize ammonia discharges, in response to (or to avoid) exceedances of this new benchmark value.

The MSGP 2000 requires Sector S facilities to monitor for ammonia if they use 100 tons or more of urea on an average annual basis. Urea is used by some airport facilities as a runway deicing agent. Under the MSGP 2000, EPA received ammonia data from only 12 of the more than 400 facilities covered under Sector S. As such, lowering this benchmark will not affect the majority of facilities covered under Sector S (i.e., those situated in warm weather environments and those using chemicals other than urea as a deicing/anti-icing agent). For the 12 facilities submitting ammonia data for Sector S, 47 of the 114 samples exceeded 2.14 mg/L.

Sector S facilities located in Arizona that have high ammonia concentrations in their discharge may choose to alter control measures such as using vacuum trucks, increasing manual snow removal, or transporting the discharge to Publicly Owned Treatment Works (POTWs) after proper approval (see U.S. EPA Office of Water EPA 816-F-02-018, August 2002 “Managing Aircraft and Airfield Deicing Operations to Prevent Contamination of Drinking Water.” Another option may be to switch to an alternative anti-icing/de-icing chemical. Airports are required to obtain stormwater discharge permits under the AZPDES program and ensure that wastes from deicing operations are properly collected and treated. EPA issued a draft of the proposed rule on airport deicing effluent guidelines on August 28, 2009; the comment period closed on February 26, 2010. Implementation date for the Final Rule is unknown at this time. Information about the proposed technology-based effluent standards can be found at <http://epa.gov/guide/airport/>.

IX.B.1.a.iv. Requiring Hardness Data for Certain Metals Benchmarks.

The benchmark values, based on water quality criteria of some metals, are dependent on water hardness. The requirement to obtain the receiving water hardness value was included in EPA’s MSGP 2008 based on comments from the Services. During consultation prior to the issuance of the MSGP 2008 permit, the Services expressed concern that creating a benchmark value based on water quality standards with a hardness value of 100 mg/L would not be adequately protective of endangered species in receiving waters where the hardness is below 100 mg/L. Since many waters have hardness values of 100 mg/L or higher, EPA opted not to lower the hardness value for all dischargers as this would create unnecessarily stringent benchmarks for some dischargers. Rather, and for simplicity, EPA tabulated applicable hardness-dependent benchmarks using 25 mg/L hardness increments. For each hardness range the benchmark level is set at the upper end of that range (e.g., for the hardness range from 50 mg/L to 75 mg/L, the benchmark value is established using the hardness at 75 mg/L). In the MSGP 2010 permittees are required to determine the hardness of their receiving water. Once the site-specific hardness data have been collected, benchmark values are calculated using a conversion table based on 25 mg/L incremental hardness ranges up to 400 mg/L. This change from EPA’s highest level of 250 mg/L, responds to stakeholders’ concerns that they would be required to meet an artificially lower standard in their discharges owing to the fact that hardness in Arizona’s surface waters often exceed 250 mg/L. The additional values are drawn from either the acute warm or ephemeral water quality standards in Tables 2 through 26 in 18 A.A.C. 11, Art. 1, Appendix A, based on the applicable receiving water.

This approach addresses the Services’ concerns with minimal additional burden on permittees. Gathering data for hardness in the receiving stream provides an appropriate way to obtain representative benchmark values that are representative of local conditions and that provide a more meaningful assessment of potential impacts on endangered species.

IX.B.1.a.v. Updating Benchmark Parameters for Certain Sectors

As part of the permit reissuance process, EPA evaluated existing benchmark data and benchmark parameters for each sector and subsector in the MSGP 2000 to assess the appropriateness of retaining these existing requirements. See above-referenced Tetra Tech, Inc. study. This analysis evaluated the effectiveness of existing controls on these discharges. The Agency also used additional data on which to assess whether additional benchmark monitoring requirements were necessary for any of the sectors or subsectors. EPA was prepared to drop any benchmark monitoring requirement where data indicated that a pollutant was not present in the discharge, or occurred consistently at such low levels that monitoring would provide no indicator value to the operator with respect to discharge quality. No parameters were dropped as a result of the evaluation.

IX.B.1.a.vi. Updating Other Benchmark Values

EPA revised 10 benchmark values (ammonia, arsenic, cadmium, copper, cyanide, mercury, nickel, selenium, and silver) (e.g., switching from a method detection limit-based (MDL-based) to an ambient water quality criterion-based value, or updated to reflect a revised water quality criterion). In some cases, these revisions represent significant reductions in the benchmarks. The values for four additional benchmarks (antimony, lead, magnesium, and zinc) are slightly revised by rounding the values to two significant figures.

Based on DMR data reported under previous permits, most facilities with effective control measures can meet these targets. Monitoring data suggest that the proposed benchmarks are achievable in general for the industries to which they will apply, although some facilities may need to make improvements to their control measures to meet these benchmarks. Facilities may also demonstrate that exceedances are due to natural background, or that discharges cannot be further minimized and document that this is the case.

In the MSGP 1995 and 2000, where an applicable water quality criterion was below the minimum level (ML) of quantification for the most sensitive available analytic method, EPA instead used a value equal to 3.18 times the MDL for that pollutant in lieu of the water quality criterion. (For a full discussion of EPA's initial approach for the derivation of the benchmarks see the Fact Sheet for the 1995 MSGP (60 Fed. Reg. 50825, September 29, 1995).

The process used in selecting the benchmark values for EPA's permit is as follows: Step 1: Use the promulgated acute criterion value; Step 2: If no EPA acute criterion exists, use the chronic criterion; Step 3: If neither acute nor chronic criteria exist, use data from runoff studies or technology-based standards to establish a benchmark.

For most parameters where the basis for the benchmark value was changed from the MDL method to the water quality basis described above, the freshwater acute water quality criteria were selected. In general, the freshwater acute criteria are less restrictive than chronic water quality criteria. Because of the intermittent nature of wet weather discharges and the high ambient flows that generally result from precipitation events, acute criteria are generally more appropriate than chronic criteria. There are a few exceptions to this general approach, as will be discussed later in this Fact Sheet.

Table 2 presents a comparison of the MSGP 2000 to the MSGP 2010's benchmark values, and the source of those values. Changes from the MSGP 2000 benchmark values are shaded in the table.

As discussed above, in some cases (i.e., arsenic and selenium) the chronic freshwater criteria is used for setting benchmarks. The arsenic acute criterion, 0.34 mg/L, is more than two times the MSGP 2000 benchmark value. In general, a discharge requirement can not be weakened unless good scientific evidence exists that a pollutant is less toxic than previously believed. This is not the case with arsenic. Additionally, the revised benchmark for arsenic of 0.15 mg/L is not significantly different from the previous benchmark of 0.17 mg/L that had been based on 3.18 times the MDL. Currently there is not an acute freshwater criterion for selenium; although draft criteria are under consideration. Hence, the chronic criterion has been selected. This benchmark may be revised in future permits.

Table 2. Comparison of MSGP 2000 and final MSGP 2010 Benchmark Values.

Comparing Benchmark Monitoring Pollutants Sources from the 2000 and final MSGP					
Pollutant	2000 MSGP Benchmark	2000 MSGP Source	Final MSGP Benchmark	Final MSGP Source	Different
Ammonia *	19 mg/L	12	2.14 mg/L	12	Yes
Biochemical Oxygen Demand (5 day)	30 mg/L	4	30 mg/L	4	No
Chemical Oxygen Demand	120 mg/L	5	120 mg/L	5	No
Total Suspended Solids **	100 mg/L	7	100 mg/L	7	No
Nitrate + Nitrite Nitrogen	0.68 mg/L	7	Reserved		Yes
Total Phosphorus	2.0 mg/L	6	2.0 mg/L	6	No
pH	6.0 – 9.0 s.u.	4	6.0 – 9.0 s.u.	4	No
Aluminum (T) (pH 6.5 - 9)	0.75 mg/L	9	0.75 mg/L	1	No
Antimony (T)	0.636 mg/L	8	0.64 mg/L	11	No
Arsenic (T)	0.16854 mg/L	8	0.15 mg/L	3	Yes
Beryllium (T)	0.13 mg/L	2	0.13 mg/L	2	No
Cadmium (T)†	0.0159 mg/L	8	0.0021 mg/L	1	Yes
Copper (T)*†	0.0636 mg/L	8	0.014 mg/L	1	Yes
Cyanide	0.0636 mg/L	8	0.022 mg/L	1	Yes
Iron (T)	1.0 mg/L	10	1.0 mg/L	3	No
Lead (T)*†	0.0816 mg/L	9	0.082 mg/L	3	No
Magnesium (T)	0.0636 mg/L	8	0.064 mg/L	8	No
Mercury (T)	0.0024 mg/L	9	0.0014 mg/L	1	Yes ^
Nickel (T)†	1.417 mg/L	9	0.47 mg/L	1	Yes ^
Selenium (T)*	0.2385 mg/L	8	0.005 mg/L	3	Yes
Silver (T)*†	0.0318 mg/L	8	0.0038 mg/L	1	Yes
Zinc (T)†	0.117 mg/L	9	0.12 mg/L	1	Yes ^

(T) Total recoverable

* New criteria are currently under development, but values are based on existing criteria.

** TSS values changed to “Reserved” for Sectors D1, E2, and L1 (sectors associated with earth moving activities that disturb large areas)

† These pollutants are dependent on water hardness. The benchmark value listed is based on a hardness of 100 mg/L. When a facility analyzes water samples for hardness, the permittee must use the hardness ranges provided in Table 1 or Table 2 in Appendix D and the appropriate tables in Part 8 of the Non-mining MSGP 2010 to determine the applicable benchmark value for that facility.

^ The values for these pollutants do not have a new basis. They are still based on the water quality criteria, but the “National Recommended Water Quality Criteria” was updated in 2002.

Sources:

1. “National Recommended Water Quality Criteria.” Acute Aquatic Life Freshwater (EPA-822-F-04-010 2006-CMC)
2. “EPA Recommended Ambient Water Quality Criteria for Beryllium.” LOEL Acute Freshwater (EPA-440-5-80-024)

October 1980)

3. "National Recommended Water Quality Criteria." Chronic Aquatic Life Freshwater (EPA-822-F-04-010 2006-CCC)
4. Secondary Treatment Regulations (40 CFR 133)
5. Factor of 4 times BOD5 (5 day biochemical oxygen demand) concentration - North Carolina Benchmark
6. North Carolina stormwater Benchmark derived from NC Water Quality Standards
7. National Urban Runoff Program (NURP) median concentration
8. Minimum Level (ML) based upon highest Method Detection Limit (MDL) times a factor of 3.18
9. "National Ambient Water Quality Criteria." Acute Aquatic Life Freshwater. This is an earlier version of the criteria document that has subsequently been updated. (See source #1)
10. "National Ambient Water Quality Criteria." Chronic Aquatic Life Freshwater. This is an earlier version of the criteria document that has subsequently been updated. (See source #3)
11. "National Ambient Water Quality Criteria." Human Health For the Consumption of Organism Only (EPA-822-F-01-010 2006)
12. "Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses." USEPA Office of Water (PB85-227049 January 1985).

IX.B.1.a.viii. Data Evaluation – Addressing Natural Background Pollutant Levels (Part 6.2.1.3).

The permit includes an option for permittees to justify benchmark exceedances based on local natural background concentrations. This option was included as a result of comments on EPA's MSGP 2008 which noted that natural background levels are the specific cause of their benchmark exceedances. For example, high natural background levels of iron in soils or groundwater could cause exceedances of a benchmark value. Please note that this provision for establishing natural background levels is not available for demonstrating compliance with effluent limitation monitoring (Part 6.2.2) or impaired water monitoring (Part 6.2.3). Under the natural background provision a permittee may discontinue benchmark monitoring after the first year of permit coverage due to exceedances attributed solely to natural background levels.

Part 6.2.1.3 of the permit allows for an exception from evaluation of control measures and further benchmark monitoring when natural background levels are solely responsible for the exceedance of a benchmark value. This can be determined if (1) natural background pollutant concentrations are greater than the corresponding benchmark value, and (2) there is *no* net facility contribution of the pollutant (i.e., average concentration detected in runoff from all facility outfalls required to be monitored under the MSGP for 4 separate events minus the average natural concentration of the parameter for 4 separate events does not exceed zero).

This natural background exception could apply to parameters such as metals derived from natural mineral deposits and nutrients attributable to background soil, vegetation, or wildlife sources. If background concentrations are not responsible for the benchmark exceedance, the facility will need to review its control measures and take further action where necessary as required in Part 2.1 of the permit. Facilities must use the same sample collection, preservation, and analysis methods for natural background monitoring as required for benchmark monitoring.

If a permittee experienced average benchmark exceedances for one or more pollutants during coverage under the MSGP 2000 or suspects that the facility might have benchmark exceedances under the permit caused entirely by natural background, he/she can begin monitoring the natural background pollutant concentrations from a non-human impacted reference site concurrently with required benchmark monitoring.

After monitoring for 4 rounds and adequately determining that exceedances are the result of pollutants present in the natural background, permittees must notify ADEQ of these findings to claim the natural background exception. The exception allows the permittee to avoid the

requirement for further evaluation of the effectiveness of control measures and to discontinue further benchmark sampling after the first year of permit coverage. To do this, the permittee must document the basis for concluding that benchmark exceedances are attributable solely to natural background pollutant levels. This explanation must include any data previously collected by the facility staff or others that describe the levels of natural background pollutants in the facility's receiving waters. The permittee must notify ADEQ when submitting its monitoring data that it is claiming the exception for natural background pollutant levels and provide a summary of the natural background conditions that justify the exception. The full justification for this exception must be kept on-site with the facility's additional documentation (see Part 5.4), and made available to ADEQ on request.

The following information, describing the rationale for claiming the natural background exception, must be documented and kept onsite with the facility's SWPPP (following one of the procedures noted in A.A.C. R18-11-115(C)):

- Map showing the reference site location in relation to facility along with available land cover information
- Reference site and test site elevation
- Available geology and soil information for reference and test sites
- Photographs showing site vegetation
- Site reconnaissance survey data regarding presence of roads, outfalls, or other human-made structures
- Records from relevant state or federal agencies indicating no known mining, forestry, or other human activities upstream of the proposed reference site
- The background concentration of a pollutant in runoff from a non-human impacted reference site in the same watershed should be determined by evaluation of scientifically credible (see A.A.C R18-11-115(C)). When no data are available, and there are no known sources of the pollutant, the background concentration should be assumed to be zero.

In cases where historic monitoring data from a site are used for generating a natural background value, and the site is no longer accessible or able to meet reference site acceptability criteria, then there must be documentation (e.g., historic land use maps) that the site did meet reference site criteria (indicating absence of human activity) during the time data collection occurred.

ADEQ may review a permittee's determination that a benchmark exceedance is based solely on natural background concentrations, and disallow the exception if it finds the documentation inadequate.

IX.B.1.b. Benchmark Monitoring Schedule (Part 6.2.1.2)

ADEQ replaced EPA's quarterly benchmark monitoring schedule with one that adapts to Arizona's climate (summer and winter wet seasons – see Section IX.A.4 of this Fact Sheet). The benchmark monitoring requirement begins immediately after authorization to discharge received by permittee. In contrast, the MSGP 2000 required monitoring during years 2 and 4 of the permit regardless of when permittees actually obtained authorization to discharge under the permit. A benchmark monitoring exception was provided to facilities whose average concentrations for discharges for all four quarters of the year 2 monitoring were below their corresponding benchmark values.

EPA's evaluation of discharge monitoring data collected under the MSGP 2000 indicates that it is most appropriate to commence monitoring soon after obtaining authorization to discharge, rather than in the second year of permit coverage, to allow facilities to assess the effectiveness of control measures and identify potential problems sooner (see memorandum located in the docket for EPA's MSGP 2008 permit entitled "Review of Discharge Monitoring Report Data for the MSGP 2000" for more details).

In the MSGP 2010, following the first year of monitoring, if the average of the monitoring values for any parameter does not exceed the benchmark, the permittee has fulfilled the benchmark monitoring requirements for that parameter for the duration of the permit term.

However, if the average of the 4 rounds (or in the case of discharge to ephemeral waters, two samples, in accordance with Part 6.2.1.5) of monitoring values exceeds any benchmark for a parameter, the permittee must evaluate his/her control measures to determine if modifications are necessary to meet the effluent limitations in the permit. If so, the permittee must either:

1. Make the necessary modifications and monitor the pollutant for the additional rounds as required by the permit. Sampling must continue until the discharger has completed the required rounds of monitoring of that pollutant until the average does not exceed the benchmark; or
2. Make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the permit's technology-based effluent limits, or necessary to meet the permit's water quality-based effluent limits. If the permittee makes this determination, the accompanying rationale must be included in the post-SWPPP documentation. No further corrective action is required, but the permittee must monitor annually for the pollutant for the remainder of the permit term and notify ADEQ in the first monitoring report of the permittee's determination.

If the permittee determines after two wet seasons of monitoring that a benchmark was exceeded solely as a result of natural background levels, the permittee may document this determination and discontinue further benchmark monitoring.

For averaging purposes, any parameter determined to be less than the method detection limit (MDL) can be assumed to be zero. For sample results that fall between the MDL and the quantitation level (i.e., detected but not quantifiable with certainty), use a value halfway between zero and the quantitation level. In any case, reports provided to ADEQ must provide either the detected value, notice that the concentration is below the method detection level, or notice that the pollutant is present but not quantifiable (and the quantitation level).

IX.B.1.c. Exception for Inactive and Unstaffed Sites (Part 6.2.1.4)

Part 6.2.1.3 of the permit allows for an exception from benchmark monitoring for facilities that are both inactive and unstaffed, when the facility no longer has industrial activities or materials exposed to stormwater. As an alternative, these facilities could submit a No Exposure Certification terminating permit coverage. However, facilities should have the flexibility to keep permit coverage active, if they plan to recommence industrial activity in the future. To qualify for this exception, permittees must maintain a signed certification along with additional documentation (Part 5.4 of the permit) that indicates that the site is inactive and unstaffed, and that there are no industrial activities or materials exposed to stormwater. Permittees are not required to obtain advance approval for this exception.

The permit states that if circumstances change and industrial materials or activities become exposed to stormwater or the facility becomes active and/or staffed, this exception no longer applies and the permittee must immediately begin complying with the applicable benchmark monitoring requirements under Part 6.2 as if he/she was in the first year of permit coverage, and notify ADEQ of the change in the first benchmark monitoring report. In the same way, if the permittee is not qualified for this exception at the time he/she is authorized under the permit, but during the permit term the facility becomes inactive and unstaffed, and there are no industrial materials or activities that are exposed to stormwater, then the permittee must notify ADEQ of this change in its next benchmark monitoring report, and may discontinue benchmark monitoring once he/she has done so, and prepared and signed the statement described above concerning the facility's qualification for this special exception.

In theory, a facility with no industrial activity and no exposed materials will not be contributing pollutants to stormwater discharges. The MSGP 2000 provided a benchmark monitoring exception for inactive and unstaffed sites, but it did not require "no exposure" of industrial materials. A discharge of pollutants does not cease when industrial materials remain exposed to stormwater, but, maintaining permit coverage for inactive and unstaffed sites is expected to be a rare event in most sectors, therefore, monitoring of these sites will not be unduly burdensome if activities and materials remain exposed to stormwater. Elimination of exposure is a reasonable prerequisite for this monitoring exception for most sectors. ADEQ concurs with EPA's rationale and has included this provision in the MSGP 2010.

Part 6.2.1.4 requires permittees to notify the Department when they become qualified for the exception and when they are no longer qualified.

IX.B.1.d. Benchmark Monitoring Exceptions for Discharges to Ephemeral Waters (Part 6.2.1.5)

The MSGP 2010 contains tailored monitoring requirements for permittees with discharges to ephemeral waters provided there is no potential for the discharge to degrade a downstream perennial surface water. The benchmark requirement to monitor total suspended solids (TSS) and turbidity is waived for these facilities and the required monitoring is reduced for the other Part 8 parameters from twice per wet season to once per wet season.

Once a minimum of two samples (rather than four for regular benchmark monitoring) have been collected, the permittee will evaluate the data as is required under the benchmark monitoring and follow the established procedures based on whether an average of the two monitored values exceeds or does not exceed the benchmark. If the average of the samples does not exceed the benchmark for the parameter of concern, the monitoring requirement for that parameter is fulfilled for the permit term. If, however, the average of the two values exceeds the benchmark, the permittee must initiate corrective actions and continue monitoring until the results confirm discharges do not exceed the benchmark. Nothing in this section limits the amount of samples the facility may take prior to averaging once the two sample minimum is met.

IX.B.2. Effluent Limitations Monitoring (Parts 6.2.2.1 and 6.2.2.2).

Numeric effluent limitations have been included in previous versions of the MSGP, based on national effluent limitation guidelines for certain industry-specific discharges (see Part 6.2.2). Consistent with minimum monitoring requirements for AZPDES permit limits established at 40 CFR 122.44(i), monitoring for these parameters must be conducted at least once each year for the duration of permit coverage. A facility's effluent limitations are specified in the Part 8

requirements that correspond to that facility's sector. Monitoring for all parameters must be conducted according to the procedures in Part 6.1 of the permit unless otherwise noted.

The permit also clarifies the requirement for corrective action whenever there is an exceedance of a numeric effluent limitation. EPA also clarifies that, in contrast to benchmarks, an exceedance of an effluent limitation constitutes a violation of the permit. Failure to conduct required corrective action and follow-up monitoring as required in Part 6.3 of the permit is an additional violation.

The permit includes one notable change regarding effluent limitations. In the MSGP 2000, EPA established a numeric effluent limitation for all coal pile runoff irrespective of the industrial activities conducted at that site. EPA used the effluent limitation guidelines applicable to the steam electric power generation industry, as detailed in 40 CFR Part 423, as the basis for these limits. Commenters to EPA's MSGP 2008 questioned how this effluent limit correlates with the applicability of these coal mining effluent limitation guidelines to other sectors, given that they were based on an assessment of discharges, control options, and economic achievability at steam electric generating facilities only. EPA agreed with these commenters and limited the applicability of this effluent limit in the permit to Sector O (steam electric generating facilities). EPA noted in their MSGP 2008 Fact Sheet that facilities that generate electric power from steam for sale to other customers would be covered by this effluent guideline even if this was not their primary business. Facilities that generate electricity for internal use only are not covered because their activities do not fall within the definition of Sector O. Hence, effluent limitations for coal pile runoff became part of Sector O (Steam Electric Generating Facilities) in the MSGP 2010 and only apply to facilities that engage in electric power generation from steam for sale to outside customers.

Additionally, facilities that use coal simply for steam generation are also not subject to these numeric effluent limitations. Applicable control measures for these facilities must be selected, designed, installed, and implemented consistent with the stormwater control requirements established in Part 2 of the permit.

Part 6.2.2.2 clarifies that permittees subject to effluent limitation guidelines are required to monitor each outfall discharging runoff, and that the flexibility afforded for benchmark monitoring for substantially identical outfalls does not apply to effluent limitation guidelines monitoring.

IX.B.3. Monitoring Discharges to Impaired Waters (Part 6.2.3).

Part 6.2.3 of the permit clarifies provisions for discharges to water quality impaired receiving waters.

As noted earlier, ADEQ's permit requires the permittee to develop and implement a monitoring program (Part 6.2.3) for authorized discharges to impaired waters.

The MSGP 2010 requires two samples per wet season at each outfall discharging to the impaired water rather than EPA's one time per year. If the results of the first year sampling determine the pollutant for which the water is impaired is not present, is not expected to be present or can be demonstrated to be due solely to natural background, the monitoring requirement is satisfied for the permit term (Part 6.2.3.2). If the pollutant is found in the first year of sampling, the permittee shall continue to monitor in accordance with the monitoring program developed under Part 6.2.4.

The following is a step-by-step discussion on how permittees should determine appropriate monitoring requirements.

IX.B.3.a. Determine Whether the Receiving Waterbody Is Impaired (Part 6.2.3.1)

Each operator is required to indicate in his/her NOI whether the facility's discharge is to an impaired water, and, if so, what are the pollutants identified as causing the impairment. Following the submittal of the NOI, ADEQ will assess each NOI to determine what, if any, monitoring requirements apply under Part 6.2.3. Based on this examination, ADEQ will notify each permittee of their impaired waters monitoring requirements.

The first step for the operator is to determine if his/her facility discharges to an impaired water. Sources can be used to determine whether the waterbody (e.g., ditch, creek, intermittent stream, lake) into which a facility's stormwater is discharged directly is impaired. ADEQ provides a web site (<http://gisweb.azdeq.gov/arcgis/emaps/?topic=impaired>) to help operators determine this. For the purposes of the permit, a permittee discharges to an impaired water if the discharge is directly to the impaired water (See Parts 1.1.4.5 and 1.1.4.6). If the discharge is to an impaired water, the monitoring requirements under Part 6.2.3 are triggered.

When developing TMDLs, ADEQ evaluates contributions from upstream segments and contributing waterbodies. As such, in some instances, upstream sources may be identified as a contributor to an impairment. Where ADEQ has reason to believe that a permitted facility has the potential to cause or contribute to an impairment in a downstream water, notwithstanding the permittee's indication in his/her NOI that the facility does not discharge to an impaired water, the permittee may be required to perform additional monitoring and/or adopt additional control measures to address the potential contribution to the impairment. In these instances, the permittee will receive written notification of the additional obligations, including any monitoring requirements.

IX.B.3.b. Determine the Pollutant(s) of Concern

After determining that a discharge is to an impaired water, the permittee must identify the pollutant(s) identified as causing the impairment, and provide a list of such pollutants in the NOI. This information is accessible from ADEQ's 303(d) list located at <http://www.azdeq.gov/environ/water/assessment/assess.html> (click on link to "2006/2008 303(d) Impaired Waters List" or current 303(d) Impaired Waters List link. Permittees are required to monitor for all of these pollutants, with a few noteworthy exceptions as discussed below. For impaired waters without a TMDL, monitoring is required only for those parameters for which a standard analytical test method in 40 CFR Part 136 exists. If a TMDL has been approved that applies to the discharge, ADEQ will determine whether there are any other monitoring specifications that are contained in the TMDL and that apply to the facility, and notify the permittee of any additional requirements. If the pollutant for which the waterbody is impaired is suspended solids, turbidity, or sediment/sedimentation, total suspended solids (TSS) must be monitored. If the pollutant of concern is an indicator or surrogate pollutant, then the pollutant indicator (e.g., dissolved oxygen) must be monitored. No monitoring is required when a waterbody's biological communities are impaired but no pollutant is specified as causing the impairment, or when a waterbody's impairment is related to hydrologic modification, impaired hydrology, or temperature.

IX.B.3.c. Impaired Waters Monitoring Schedule (Part 6.2.3.2): Determine Monitoring Frequency

i. Discharges to impaired waters without a TMDL. For those permittees discharging to impaired waters without an approved TMDL, monitoring is required for the pollutant(s) of concern twice per wet season. Following the first year (i.e., first two wet seasons, or 4 samples), impaired waters monitoring is no longer required if the pollutant of concern is not detected above water quality standards or is not detected above natural background levels in the discharge (see Part 6.2.1.3), and the pollutant of concern is not expected to be present above natural background levels in the facility's discharge. If the permittee determines that the presence of the pollutant of concern is caused solely by the natural background levels of that pollutant, he/she must notify the Department of this finding and retain documentation of the basis for the determination with the SWPPP.

- Sampling must be conducted for surrogate or indicator pollutants if they were used in determining that the waterbody is impaired or if they have been specifically given a WLA in a TMDL.
- Sampling for pollutants of concern for impaired waters without a TMDL is only required where a standard analytical method exists for sampling that particular parameter.
- Permittees that discharge to impaired waters without a TMDL can now indicate in their monitoring report if the presence of a pollutant of concern in the first year's sampling is due solely to the natural background levels (see Part 6.2.1.3) of that pollutant, and, if so, discontinue monitoring.

The permittee should note that, as with all four types of monitoring in the permit, they can combine monitoring activities where requirements are duplicative (e.g., effluent limitation guideline and impaired water monitoring both require testing for the same parameter at the same outfall).

ii. Discharges to impaired waters with an approved TMDL. If the permittee discharges to an impaired water with an approved TMDL, monitoring is not required for the pollutant causing the impairment unless ADEQ informs the permittee that it is subject to such a requirement consistent with the goals of the applicable TMDL and/or WLA. Where applicable, the Department's notice will include specifications on which pollutant to monitor and the required monitoring frequency. The monitoring frequency can be changed depending on the results of sampling. If none of the samples in the first monitoring year indicate the presence of the TMDL pollutant(s), monitoring may be discontinued unless the TMDL indicates otherwise. Records of this monitoring must be retained with the SWPPP to indicate the pollutant(s) of concern are not present in the permittee's discharge, as required in Part 5.4, "Additional Documentation Requirements". However, if the pollutant of concern is detected in any samples during the first year, the permittee is required to continue monitoring at a minimum of once each permit year.

- Permittees that discharge to impaired waters with approved TMDLs are only required to monitor for the pollutant(s) causing the impairment where EPA specifically notifies those permittees of their specific monitoring requirements.
- Where sampling is required for discharges to impaired waters with TMDLs, sampling may be discontinued if the first two wet seasons of sampling (minimum of

4 samples) indicate that the pollutant of concern is not present, unless the TMDL specifically precludes this. If the pollutant of concern is detected, sampling should continue at a frequency of twice per wet season (or alternate frequency if specified in the TMDL, and notified of such by ADEQ).

Part 6.2.3 is intended to provide ADEQ with further information on the impacts permitted industrial facilities have on impaired waters, and to help ensure that the facilities are not causing or contributing to the impairment. For discharges to impaired waters that do not yet have TMDLs developed, these monitoring data are important when developing the TMDL in the future to identify potential sources of the pollutants causing the impairment as well as to identify sources that do not contribute the pollutant and thus should not be included in the TMDL. They are also important for assessing whether additional water-quality based requirements, either numeric or qualitative, are necessary on a site specific basis to ensure that the facility does not cause or contribute to a water quality standards violation. For discharges to waters for which a TMDL is applicable to the permittee, monitoring data provides a means of ensuring that the permittee is consistent with TMDL, as well as a useful tool to assess progress in meeting the goals of the TMDL.

IX.B.4. Additional Monitoring Required by ADEQ (Part 6.2.4).

As with the MSGP 2000, the MSGP 2010 requires facilities to perform additional discharge monitoring in those instances when ADEQ determines it is necessary to ensure the protection of receiving water quality. Such monitoring serves as a tool for the Department and the permittee to evaluate whether additional control measures are needed to protect receiving water quality.

Permittees that discharge to OAWs are required to submit a copy of the SWPPP at the beginning of the application process. Upon review of the SWPPP, ADEQ may determine that additional discharge monitoring is required. In this case, the Department will provide the appropriate facility with a brief description of why additional monitoring is needed, locations and parameters to be monitored, frequency and period of monitoring, sample types, and reporting requirements.

ADEQ will require additional monitoring when there is evidence that a pollutant is being discharged that is not being monitored for and that the pollutant is causing or contributing to exceedances of a water quality standard.

IX.C. Follow-up Actions if Discharge Exceeds Numeric Effluent Limitations or Water Quality Standards (Part 6.3)

The MSGP 2010 includes follow-up monitoring provisions for pollutants that exceed an effluent limitation guideline or water quality standard (as specified in Part 2.2.2 of the permit) contained in the permit. This is a new requirement, designed to ensure that existing control measures are modified as necessary to bring the facility back into compliance with the effluent limitations and water quality requirements contained in the permit. The permit emphasizes that failure to complete follow-up monitoring and reporting within the stipulated time frames constitutes an additional violation of the permit, in addition to the initial effluent limitation or water quality standard violation. The MSGP 2000 required no follow-up monitoring for effluent limitation and water quality standard exceedances.

Follow-up monitoring provides a means to ensure that permittees will come back into compliance with applicable effluent limitations or water quality standards as soon as possible. While the AZPDES regulations require a minimum of annual monitoring to demonstrate compliance with applicable effluent limitations and water quality standards, the vast majority of AZPDES permits for industrial wastewater discharges require more frequent monitoring. The MSGP 2010 monitoring requirements of twice per wet season are deemed appropriate for stormwater discharges, provided the facility remains in compliance with the numeric effluent limitations and water quality standards. However, more frequent monitoring is appropriate once the effluent limitation or the standard is exceeded. Follow-up monitoring is required only for exceedances of effluent limitations or water quality standards contained in the permit. If the MSGP 2010 did not require any follow-up monitoring, an additional year would lapse before any confirmation that the facility has come back into compliance with the limitation or the standard. This is an unacceptably long period for the permittee to be potentially out of compliance with the limitations and/ or standards. The permit requires monitoring twice per wet season (as well as immediate corrective action with appropriate post-SWPPP documentation) when these exceedances occur, until the facility has come back into compliance.

Procedures and timeframes for responding to these exceedances are described in Section VI of this Fact Sheet. Monitoring, of course, must continue as part of the follow-up actions. The monitoring must be conducted during measurable storm events that occur during the summer and/ or winter wet seasons; hence at least two samples per wet season must be collected until the discharge is in compliance with applicable water quality requirements or numeric effluent limitations or the Department waives the requirement to continue monitoring. Also, consistent with other types of effluent monitoring, the permit requires that these follow-up monitoring results be reported to ADEQ (see Part 7 of the permit).

X. Reporting and Recordkeeping (Part 7)

This part describes the requirements for submitting monitoring data to ADEQ to document stormwater quality and identify potential water quality concerns. Monitoring data must be submitted to document stormwater quality and identify potential water quality concerns to ADEQ.

X.A. Reporting Monitoring Data to ADEQ (Part 7.1)

Permittees must submit all applications (i.e., notices of intent, notices of termination, no exposure), DMR forms, monitoring data and reports to ADEQ at the address indicated in Part 7.6. Do not submit any of the required information to EPA.

The purpose of submitting monitoring data is to document stormwater quality and identify potential water quality concerns to ADEQ. Monitoring data should be submitted using the MSGP discharge monitoring report (DMR) form that is available on the ADEQ website at: <http://www.azdeq.gov/environ/water/permits/stormwater.html>.

All monitoring data shall be submitted to ADEQ not later than July 15 of each year of permit coverage.

The MSGP 2000, in Part 7.1, required the 4 benchmark monitoring samples for each year to be submitted in one package at the end of the monitoring year. Monitoring for numeric limitations was required to be reported to ADEQ by the 28th day of the month following the monitoring period. In the MSGP 2010, the reporting deadline was modified to require data from

the previous two wet seasons be submitted by July 15 of each year of permit coverage. Benchmark and effluent limitations monitoring data must now be submitted on the same schedule, which should reduce the burden on permittees with both types of monitoring requirements.

X.B. Annual Report (Part 7.2)

All facilities are required to complete an annual report, but only those facilities that discharge to an impaired water or OAW are required to submit one to ADEQ. The annual report must include the findings from their annual comprehensive facility inspection report, a report detailing any conditions that triggered corrective actions and the status of those actions taken in response. All other dischargers that do not discharge to these specially designated waters should file the annual report with the SWPPP. An Annual Report Form is provided for use when filing the annual report. The requirement to file an annual report is intended to improve accountability by requiring that all dischargers to impaired waters or OAWs report to ADEQ at least annually, thus allowing the Department to confirm that required annual inspections and corrective actions have been performed to protect these waters. ADEQ expects information from the annual CFI and information on corrective actions to improve the basis on which to evaluate permittee performance and compliance that discharge to these listed waters.

ADEQ believes that some form of regular reporting is necessary from dischargers to impaired waters and OAWs to assess compliance with the effluent limitations and gauge how protective the SWPPP is in keeping pollutants out of stormwater discharges to these listed waters. The results of the annual comprehensive facility inspection will provide a better indication of permit compliance and potential water quality concerns than would 4 sets of monitoring results (covering two wet seasons) for a limited number of benchmark parameters that is not even applicable to all 25 sectors (analytical monitoring is not required for Sectors P, R, T, V, W, X, Z, AB & AC). Permittees that discharge to impaired waters and OAWs are required to submit a copy of the SWPPP at the beginning of the application process, but the SWPPP does not provide an indication of how well the control measures are performing during storm conditions. The CFI findings (and any corrective actions taken during the year) are a better tool to assess permittee implementation of control measures. Furthermore, the CFI report does provide a mechanism for assessing both the adequacy of a permittees' selected control measures and how well they are being implemented to meet the effluent limitations in the permit.

The MSGP 2000 did not require permittees to submit annual reports to ADEQ; rather, permittees were only required to retain a copy of the annual inspection report on-site with the SWPPP. Under the MSGP 2010, most permittees are not required to submit annual comprehensive facility inspection reports to ADEQ. The Department requires submission of annual reports only from facilities that discharge to an impaired water or OAW. The purpose is to gather information to identify potential water quality concerns and to assess compliance with permit provisions. Co-located facilities may be included on the same annual report.

Also, the MSGP 2000 did not have an inspection report template that could be used for conducting and documenting the findings of these inspections. As described above, most permittees covered under the previous permit were not required to submit any compliance monitoring information on which ADEQ could assess compliance.

X.C. Exceedance Report for Numeric Effluent Limitations or Water Quality Standards (Part 7.3)

As described in Part 6.3, permittees must conduct follow-up monitoring any time a monitoring event identifies an exceedance of a numeric effluent limit or a water quality requirement (as specified in Part 2.2.2 of the permit). An exceedance report is a new requirement and enables ADEQ to assess: 1) the potential impact of these discharges on water quality; and 2) the adequacy of the permittee's response to the exceedance. Part 7.3 specifies that these data must be submitted to ADEQ no later than 30 calendar days after receiving lab results. Part 7.3 also identifies the specific information to be included in this report, which is necessary for ADEQ to assess the potential impact of this discharge on water quality and the adequacy of the permittees response in addressing the exceedance.

X.D. Other Reporting (Part 7.4)

Permittees must comply with a number of different reporting requirements described throughout the permit. The MSGP 2000 did not contain a specific provision listing these additional reporting requirements in one place, although the standard permit conditions containing these substantive requirements were also included in MSGP 2000. Reporting requirements to be submitted to the Department are summarized in Part 7.4 and standard reporting requirements described in Appendix B, Subsection 12.

X.E. Recordkeeping (Part 7.5)

Part 7.5 describes recordkeeping requirements associated with activities covered under the permit. Permittees must maintain certain records to help them assess performance of control measures and document compliance with permit conditions. Specific records must be maintained and includes the original SWPPP and any modifications to it. The recordkeeping must include the additional documentation, all reports and certifications required by the permit, monitoring data, and records of all data used to complete the NOI to be covered by the permit. These records provide a traceable historical record of installation, maintenance, and monitoring of control measures and revisions to those control measures documented in the SWPPP. Permittees must retain copies of these documents for a period of at least 3 years from the date that the permittee's coverage under the MSGP 2010 expires or is terminated. The recordkeeping requirements in Appendix B, Subsection B.12 include a more general statement of the AZPDES standard condition for records retention, but does not impose additional requirements on the permittee above what is required in Part 7.5. These requirements are consistent with federal regulations at 40 CFR 122.41(j), but have been tailored to more closely reflect requirements of the MSGP. The permit language specific to recordkeeping in Part 8 of the MSGP 2000 has been split amongst recordkeeping, reporting, and addresses for report submission.

X.F. Addresses for Reports (Part 7.6)

Except for reports of non-compliance, all required documentation must be submitted to the Department's Stormwater Permits Unit at the address listed in the permit. Reports of non-compliance must be submitted to the Department's Water Quality Compliance Section.

XI. Sector-Specific Requirements for Discharges Associated with Industrial Activity (Part 8)

Part 8 describes requirements specific to the particular industry sectors. The MSGP 2010 is available to facilities with stormwater discharges associated with industrial activity in 25 industry sectors (Sector A through F and Sector K through AC), as well as any discharge not covered under those sectors (Sector AD) that has been identified by ADEQ as appropriate for coverage. The sector descriptions are based on Standard Industrial Classification (SIC) Codes and Industrial Activity Codes consistent with the definition of stormwater discharge associated with industrial activity at 40 CFR 122.26(b)(14)(i, ii, iv-ix, xi). Appendix C of the permit presents the specific information on each sector. Refer to Table 1 in Section III for the industrial sectors covered by the permit.

Except for the changes to the monitoring requirements described in Section IX of this Fact Sheet and the changes to individual sectors listed below, the general format and requirements in the sector-specific parts of the permit (Part 8) are similar to the MSGP 2000. A few general changes were made to each sector including:

- Clarified that the sector-specific requirements apply to both the primary industrial activity and any co-located industrial activities at the facility.
- Clarified that the sector-specific requirements are in addition to any requirements specified elsewhere in the permit.
- In many sub-sections of Sectors M through AC, several control measures are presented as possible options. The language was clarified that permittees must implement effective controls to minimize the introduction of pollutants into stormwater. Where several options are listed, the language now clarifies that permittees must implement one or more control measure options or other equivalent measures, as the permittee determines is appropriate for the particular facility and location.
- Deleted (for most sectors) the narrative section describing industrial activities covered by that sector in order to avoid any confusion with the list of activities in Appendix C. This narrative section was included in the MSGP 2000, however, the activities covered by the permit, including SIC Code or Activity Code, are already listed in Appendix C.
- Deleted or moved technology-based requirements that broadly apply to all sectors and are better described in the Part 2.1 control measures.
- Renamed the “SWPPP requirements” subpart to be “Additional Requirements” to highlight that these requirements are in addition to those included elsewhere in the permit (e.g., in Part 5).
- Clarified some requirements when an activity needs to be addressed in the SWPPP.
- Similar to Parts 2, 4, and 5 of the permit, separated the control measures, inspection requirements, and SWPPP documentation requirements into separate subsections of Part 8 of the permit, as appropriate, for each sector with any additional requirements.

Changes to several specific sectors are discussed in more detail below.

XI.A. Changes to Multiple Sectors

Separation of Benchmark and Effluent Limitation Guideline Monitoring Requirements. The MSGP 2000 included tables corresponding to specific sectors that, where applicable, consolidated both benchmark and effluent limitation guideline monitoring requirements. To

minimize confusion between these two types of monitoring, which have different requirements and serve different functions in the permit, benchmarks and effluent limitation guidelines are separated into two tables in the MSGP 2010. This change affects Sectors A, C, D, E, K, and L.

Removal of Duplicative Sector-Specific Requirements. The Sector-based requirements are better streamlined by eliminating those conditions which are duplicative of the Part 2.1 control measures. The list of requirements below were deleted or significantly modified in the “additional requirements” part of the sector-specific conditions (most of which were also carried over from the MSGP 2000):

- Sector C: 8.C.4.1 (drainage area site map), 8.C.4.2 (potential pollutant sources), and 8.C.4.3 (good housekeeping measures);
- Sector D: 8.D.4.1 (inspections);
- Sector E: 8.E.3.3 (inspections);
- Sector L: 8.L.5.3 (good housekeeping measures) and 8.L.5.9 (comprehensive site compliance evaluations);
- Sector N: 8.N.4.2.7 (spill prevention and response procedures), 8.N.4.2.8 (inspections), and 8.N.4.3.4;
- Sector O: 8.O.4.2.14 (vehicle maintenance activities) and 8.O.4.2.15 (material storage areas);
- Sector Q: 8.Q.4.3.7 (general yard area) and 8.Q.4.7 (comprehensive site compliance evaluation);
- Sector R: 8.R.3.3.7 (general yard area) and 8.R.3.7 (comprehensive site compliance evaluation);
- Sector V: 8.V.4.5 (comprehensive site compliance evaluation);
- Sector X: 8.X.3.1 (drainage area site map) and 8.X.3.2 (potential pollutant sources);
- Sector AA: 8.AA.3.5.3 (receiving, unloading, and storage areas) and 8.AA.3.5.4 (storage of equipment); and
- Sector AB: 8.AB.3.2 (non-stormwater discharges).

In addition, numerous minor modifications were made to other sector-specific requirements to eliminate duplication with other parts of the permit. For example, Sector L no longer contains the requirement to maintain containers to prevent leaking because it is already required by Part 2.1.1.4 of the permit. All of these changes are organizational only. Except where otherwise noted, the substantive control requirements previously contained in these sections have not changed.

XI.B. Sector C – Chemical and Allied Products Manufacturing and Refining

Industrial Activities Covered by Sector C (Part 8.C.1). The permit defines the scope of coverage for discharges from chemical and allied products manufacturing and refining facilities.

The language in this version (Part 8.C.1) was modified from MSGP 2000 to include petroleum refining activities (SIC 2911), previously covered under Sector I (oil and gas extraction activities). This change was made because petroleum refining activities are much more similar to chemical and allied products manufacturing than to oil and gas extraction activities and stormwater controls for these activities are, likewise, expected to be similar.

XI.C Sector D1 – Asphalt Batch/ Bituminous Concrete Plants (SIC 2951, Sector D – Asphalt batch/ Bituminous Concrete Plants)

Inactive and Unstaffed Sites – Conditional Exemption from No Exposure Requirements for Sector D Facilities (Part 8.D.3).

Asphalt batch plants may operate intermittently, according to market demand. Asphalt batch/ bituminous concrete plants (SIC 2951) are eligible for the modified waiver language for benchmark monitoring for inactive and unstaffed sites. To receive the waiver, facilities in this sector must remove all potential pollutant sources used in the manufacture of asphalt, with the exception of the aggregate stockpiles, which are derived either from the adjoining sand and gravel excavation site (in the case of co-located facilities with Sector J) or are hauled in bulk from a nearby source. Permit holders of Sector D facilities must establish control measures around these piles to ensure no pollutants are discharged with stormwater offsite.

XI.D Sector E2 – Concrete Batch Plants (Sector E – SIC 3273)

Inactive and Unstaffed Sites – Conditional Exemption from No Exposure Requirements for Sector E Facilities Co-located at Sector J Facilities (Part 8.E.4).

Concrete batch plants are often co-located on sand and gravel mining sites (Sector J) and may be used intermittently, according to market demand. Only co-located ready-mixed concrete plants; those primarily engaged in mixing and delivering ready-mixed concrete (SIC 3273) are eligible for the modified waiver language for benchmark monitoring for inactive and unstaffed sites. To receive the waiver, facilities in this sector must remove all potential pollutant sources used in the manufacture of concrete, with the exception of the aggregate stockpiles, which are derived from the adjoining sand and gravel excavation site. Other facilities in Sub-Sector E2 that manufacture brick (SIC 3271), pre-cast concrete (SIC 3272), lime (SIC 3274), gypsum products (SIC 3275) and concrete block are not eligible for this waiver.

XI.E Sector K – Hazardous Waste Treatment Storage or Disposal Facilities

Industrial Activities Covered by Sector K (Part 8.K.2). Part K.2 identifies facilities that are eligible for coverage under Sector K. It also clarifies that disposal facilities that have been properly closed and capped do not need coverage under an AZPDES permit.

The language relating to the exemption of disposal facilities which have been properly closed and capped was not included in the MSGP 2000 and is a new provision. EPA's intention for facilities that have properly closed and capped their disposal areas is that they are exempt from MSGP permitting requirements consistent with applicable Subtitle C Resource Conservation and Recovery Act (RCRA) regulations and no longer have any significant materials exposed to stormwater. The definitions for "land treatment facility," "pile," and "surface impoundment" were also removed because these terms are not used in the permit. The Department acknowledges that these are three common hazardous waste management practices that may be used by permittees eligible for coverage under the permit.

XI.F. Sector L – Landfills, Land Application Sites, and Open Dumps

Transfer stations are a covered industrial activity under the permit, but not under Sector L. See discussion under Section XI.I, Sector P.

Inspection Schedule of Active Sites (Part 8.L.7.1). The inspection schedule for landfills (Sector L, Part 8.L.7.1) is adapted to Arizona's arid climate; namely the inspections should occur at least once per month. Language has also been added to provide for increased protections of impaired and outstanding Arizona waters from pollutants in stormwater. Active sites with a discharge point within 1/4 mile of impaired or outstanding Arizona waters must be inspected at least twice per month, with at least 7 calendar days between inspections. Operators must visually observe stormwater discharges at every discharge location within one business day of the end of a measurable storm event. The stepped up inspection schedule for sites within 1/4 mile of impaired or outstanding Arizona waters is expected to encourage operators to spot failing control measures early and prevent discharge to these waters so as not to contribute further to their impairment.

XI.G. Sector N – Scrap Recycling and Waste Recycling Facilities

Scrap and Recyclable Waste Processing Areas (Part 8.N.3.1.5). This section identifies control measure requirements for scrap and recyclable waste processing areas for facilities in Sector N.

An earlier draft of EPA's MSGP considered a new control measure requirement to remove mercury switches from the hood and trunk lighting units and anti-lock brake systems. The final permit removes this language.

For background, automotive recyclers, in Sector M (Automobile Salvage Yards), process retired passenger vehicles, removing parts for reuse, recycling, or disposal, and then sell the stripped-down vehicles to scrap recyclers. Scrap recyclers, in Sector N (Scrap Recycling and Waste Recycling Facilities), shred the vehicles and produce scrap metal for sale to steelmakers. The mercury in certain switches used in many vehicles prior to 2003 can, if the switches are not recovered before the vehicles are flattened or shredded, be released into the environment later in this recycling stream, especially from steel mill furnaces.

In the absence of a national solution to this problem, EPA considered including a requirement for facilities in Sectors M and N to remove and dispose of these mercury-containing switches. However, the requirement is not included in the permit as it was considered unnecessary given that facilities in Sectors M and N now have the option to participate in, or to purchase car hulks that have come through, the National Vehicle Mercury Switch Recovery Program (NVMSRP), and have various incentives to do so. This comprehensive voluntary program, established in August 2006, is available to all such facilities, regardless of the State in which the facility is located or whether the facility has a stormwater permit. Complete information about the program is available on-line at www.epa.gov/mercury/switch.htm.

Stockpiling of Turnings Exposed to Cutting Fluids (Outdoor Storage) (Part 8.N.3.1.3). This section specifies two options for managing turnings exposed to cutting fluids: (1) manage the wastes to eliminate contact between the turnings that have been exposed to cutting fluids and precipitation; or (2) where this is not possible, capture and treat any contaminated stormwater from these areas. The MSGP 2000 included similar requirements; however, the current language provides clearer direction for managing these wastes.

Inspection Requirements (Part 8.N.5.1). This section requires Sector N permittees to perform quarterly site inspections, as required in Part 4.1, but also specifies, at a minimum, that such inspections include all areas where waste is generated, received, stored, treated, or disposed of and that are exposed to either precipitation or stormwater runoff.

Sector-Specific Benchmarks (Table 8.N-1). This table presents benchmarks for all non source-separated recycling facilities.

XI.H. Sector O – Steam Electric Generating Facilities

Changes were made to this sector to clarify exactly what types of facilities are covered while preserving the original intent of the stormwater regulations and the rationale presented in the MSGP 1995. In past permits, there has been considerable confusion about the types of power generation facilities covered or not covered by the regulations. One source of confusion stemmed from EPA's use of the term "dual-fuel cogeneration facilities" (which were covered by the MSGP). This term was not previously defined in the permit, and, subsequent to its introduction, became archaic within the power generation industry. Therefore, the applicable terminology has been updated and defined in the permit. The revised terminology does not change the universe of covered facilities. Facilities covered by this sector are described narratively rather than by SIC codes. Broadly speaking, and in accordance with 40CFR 122.26(b)(14)(vii), every facility that generates power using steam somewhere in the process (either as a primary or secondary energy source for moving turbines) is covered by this permit. However, as discussed below, there are qualifications and exceptions. These qualifications and exceptions generally revolve around whether the steam electric facility uses a fossil fuel or nuclear source as a fuel back-up.

Industrial Activities Covered by Sector O (Part 8.O.2.3). "Dual fuel co-generation facilities" has been replaced with "dual fuel facilities that could employ a steam boiler." The language in Part 8.O.2.3 of the permit was not included in the MSGP 2000.

The EPA and accepted industry definition of *cogeneration* is "the merging of a system designed to produce electric power and a system used for producing industrial heat and steam" (Profile of the Fossil Fuel Fired Electric Power Generation Industry notebook, September, 1997). Cogeneration technologies are classified as "topping cycle" and "bottoming cycle" systems, depending on whether the electrical (topping cycle) or thermal (bottoming cycle) energy is derived first. Most cogeneration systems use a topping cycle. The most common configurations are: 1) a boiler connected to a steam turbine; or 2) a gas turbine, followed by a heat recovery steam generator (HRSG) which may include a duct burner for supplemental firing, followed by a steam turbine. Regardless of the configuration, both electricity and steam (or heat) are end products.

Typically, the boilers in configuration 1 are fired with coal or oil and the gas turbines in configuration 2 are primarily fired with natural gas with fuel oil as a back up at some facilities. The duct burner in the HRSG is typically fired with natural gas. Boiler facilities (configuration 1) generate their electricity from the use of steam, whereas gas combustion turbine facilities (configuration 2) generate their electricity primarily from the gas turbine cycle. Configuration 1 facilities are the type EPA has always required to obtain permit coverage.

The EPA and accepted industry definition of *combined-cycle generation* is "a configuration using both gas turbines and steam generators. In a combined-cycle gas turbine, the hot exhaust gases of a gas turbine are used to provide all, or a portion of, the heat source for the boiler, which produces steam for the steam generator turbine." Typical configurations include a gas turbine, a fired or unfired HRSG, and a steam turbine generator. The gas turbines are primarily fired with natural gas and some may fire fuel oil as a back up (see dual-fuel discussion below).

As stated in the introductory paragraph to this sector, the term “dual-fuel cogeneration facilities” (identified as needing coverage) has been dropped from the permit because it is not used within the power generation industry. The concept of dual fuel will be addressed to preserve the intent of past permits. A *dual-fuel* facility has the capability of generating electricity by burning either natural gas or another fossil fuel (typically oil). Thus, a simple-cycle dual-fuel facility being regulated by the permit would have the capability of using both a gas turbine and an oil-fired steam boiler (or both in tandem), but would not include a facility that burns oil to generate power without a steam boiler (as in a diesel generator).

A regulated combined-cycle facility would also have a gas-steam option (in this context, prior to the HRSG component). For dual-fuel facilities, the option to burn fossil fuel for use in a steam boiler is sufficient to cause the facility to need permit coverage (regardless of whether the gas turbine alone is actually used). The inclusion of dual-fuel facilities, but only those that could employ a steam boiler, in the permit is consistent with the intent of previous stormwater permits.

Limitations on Coverage (Part 8.O.3). Those types of facilities that do not need permit coverage (i.e., they do not have a steam component in their power generation) have been listed in this section of the permit due to the numerous types of power plants using different combinations of processes and technologies. One of these plant types not covered under the permit that uses multiple technologies was previously identified as a “heat capture co-generation facility,” but the use of this terminology has long been a source of confusion and is regarded as obsolete. Clarifying language for this term was added, as well as extra explanations regarding the absence of steam boilers for the other non-covered facility types, ancillary facilities and gas turbine facilities. The language in Part 8.O.3.2 was not included in the MSGP 2000.

As previously noted, duct burners in HRSGs are typically fired with natural gas. Along with simple-cycle gas turbine facilities (see 8.O.3.2.2) and configuration 2-type gas turbine cogeneration facilities (see 8.O.3.2.3), combined-cycle generation facilities are also not covered by stormwater permitting requirements, provided no supplemental fuel oil is burned in the HRSG and the facility is not otherwise a dual-fuel facility which uses steam.

Cogeneration facilities, which are of the type described under configuration 2 above, are equivalent to the obsolete term “heat capture cogeneration facilities.” Therefore, gas turbine cogeneration facilities (only those that do not have an oil-fired steam boiler as a back up; see the dual-fuel discussion above) are likewise excluded from stormwater permit coverage.

Additional Requirements (Part 8.O.4). Part 8.O.4 imposes additional requirements that supplement the Part 2.1 technology-based requirements. Requirements for vehicle maintenance activities and material storage areas (Part 6.O.4.2.14 and Part 6.O.4.2.15 of the MSGP 2000, respectively) duplicate those of Part 2.1 of the permit and were deleted.

XI.I. Sector P – Land Transportation and Warehousing

Transfer stations – refuse collection and transportation of refuse – are a covered industrial activity under the permit, but not under Sector L. The SIC Manual states: “Establishments primarily engaged in collecting and transporting refuse without such disposal are classified in Transportation, Industry 4212.” This code brings the transfer aspect of waste disposal into the permit. In other words, in accordance with the SIC Manual description, local trucking or transfer services without storage are covered under Sector P (SIC 4212).

XI.J. Sector S – Air Transportation

Sector S was modified so that permittees may align appropriate permit activities to facilities' deicing timeframes; i.e., it is most appropriate to monitor for deicing-related parameters only when deicers are used. Hence, the permit now includes requirements to identify operators' deicing/anti-icing season and to perform applicable deicing-related permit tasks at the appropriate time and place. Also, as described in Section X.B.1.a.iii of the Fact Sheet, the ammonia benchmark is now 2.14 mg/L, a reduction from 19 mg/L in the previous permit. In general, ammonia discharges are attributable to the use of urea for deicing purposes although lower levels of ammonia have been detected as by-products from wastewater collection and treatment of other deicers.

Deicing Season (Part 8.S.4.2.1). The permittee must document in the SWPPP the seasonal timeframe (e.g., December- February) during which deicing activities typically occur at the facility. The permit requires an emphasis on conducting deicing-related stormwater control tasks such as implementation of control measures, monitoring, and facility inspections during the defined deicing season. In addition, for operators meeting the annual average deicing chemical usage minimums of 100,000 gallons glycol or 100 tons of urea, all benchmark monitoring samples must be taken during the identified deicing season for the deicing-related parameters (BOD, COD, ammonia and pH).

EPA's MSGP 2008 lists two best management practices for managing stormwater runoff that is contaminated by deicing operations: 1) direct runoff into unlined vegetative swales or other infiltration measures; and/ or 2) direct runoff into a wet pond for biochemical decomposition. Before either of these practices would be allowed in Arizona, an aquifer protection permit (APP) would be required. These two BMP options were eliminated and replaced with the substitute option to direct contaminated runoff into lined impoundments for evaporation. The department views this as an adequate option for Sector S permittees, although the lined impoundment will require coverage under a Type 3.01 General APP (see A.A.C.R18-9-D301).

Under the APP program, a permit is required for any facility that seeks to discharge to the aquifer or vadose zone (the zone between the ground surface and any aquifer). ARS § 49-241, specifies that surface impoundments are a discharging facility that must obtain an APP. ADEQ has developed general permits to govern certain impoundments, specifically the Type 3 General Permits. To obtain coverage under a Type 3 APP, a surface impoundment must meet the requirements established in rule concerning design, installation, and operation, and the permittee must follow the specific terms of the permit regarding monitoring, reporting and closure. The owner of the surface impoundment must file the appropriate Notice of Intent forms and supplemental information, and pay the applicable general permit review fees. An operation that is unable to meet the Type 3 General Permit requirements must obtain coverage under an individual APP.

Commenters to EPA's MSGP 2008 suggested that confusion exists regarding how to determine the glycol and urea "average annual usage rate" which determines whether deicing-related benchmark parameter monitoring must be done. For clarification, this rate is determined by averaging the total amounts of deicing/anti-icing chemicals used for the three previous calendar years by the airport authority plus all tenants. It is recognized that dilution of chemicals is standard procedure, so the pre-dilution volumes of the chemicals should be used.

Arizona stakeholders suggested lengthening the 14 day requirement to document corrective actions taken (see Part 3.2). The purpose would be to allow adequate time for operators of large airports to contact co-permittees about deficiencies found in their SWPPPs or at their facilities during inspections. ADEQ added a new section (“Additional Corrective Action Deadline Requirements” – Part 8.S.4) that allows operators that jointly prepare SWPPPs with their tenants (co-permittees) to have up to 30 calendar days (an additional 16 days beyond the 14). The Department recognizes that the 14 day timeframe for the largest airports in the state may be too short, if operating under one jointly prepared SWPPP with a multitude of tenants. However, this additional time applies only to situations where co-permittees sign on to a jointly prepared SWPPP, but also file separate NOIs. If some airport tenants choose to write their own SWPPP and file a separate NOI, this time extension does not apply.

As discussed above, in the final permit, the ammonia benchmark was lowered from 19 mg/L to 2.14 mg/L. This change affects both Sector S and Sector K facilities. See Section IX.B.1.a.iii for more specific information.

XII. Included Appendices

The four appendices to the permit include: definitions, abbreviations and acronyms; standard conditions; a table of sector-specific SIC codes covered by the permit; and guidance for calculating hardness.

Appendix A – Definitions, Abbreviations and Acronyms

Appendix B – Standard Permit Conditions – the standard conditions in the MSGP 2010 are essentially consistent with the standard conditions in other AZPDES general permits. However, the MSGP 2010 contains the following additional provisions and revisions:

- o Appendix B.9 – as with EPA’s permit, Appendix B.9(c) was added to define a “duly authorized representative.”
- o Appendix B.11(d) and 12(b) – All references to “sludge use or disposal” were removed because such requirements do not apply to MSGP dischargers.
- o Additional language from Appendix B.12(d) from EPA’s MSGP 2008 about monitoring reports has been incorporated into Part 7 of the MSGP 2010 to reflect EPA’s updated conditions.
- o Includes bypass and upset conditions incorporated as Appendix B.21 and B.22, respectively.

Appendix C – Facilities and Activities Covered – Sectors A through F and K through AD are covered. The mineral industry of 40 CFR 122.26(b)(14)(iii) are covered in a separate MSGP (Sectors G, H, I and J).

Appendix D – Calculating Hardness in Surface Waters Receiving Stormwater Discharges for Hardness Dependent Metals – Appendix D describes the alternatives for establishing the hardness level for an operator’s receiving water. This appendix provides guidance to operators for determining their receiving water’s hardness level and is calculated up to 400mg/ L to reflect hardness conditions in Arizona’s waters. This language did not exist in the MSGP 2000, which did not include hardness-dependent benchmarks. Appendix D was created to help implement the Part 6.2.1.1 requirement for dischargers required to conduct benchmark monitoring for hardness-dependent metals to determine their receiving water’s hardness level.

XIII. Applicable Forms

Described briefly herein are applicable forms associated with the MSGP 2010.

XIII.A. Notice of Intent (NOI)

Like the MSGP 2000, the MSGP 2010 requires all facilities to prepare and submit a complete and accurate NOI for ADEQ review to be eligible for permit coverage. The NOI form provides the information necessary for ADEQ to determine an industrial operator's eligibility to discharge under the permit, and enables the Department to match permittees with their respective monitoring requirements and to prioritize oversight activities. All new and existing facilities must submit NOIs in accordance with the deadlines provided in Table 1-2 of the permit.

The NOI form has been updated and expanded from previous versions. Permittees must provide the following types of information on the NOI form: (A) Application Revision, (B) Facility Operator Information, (C) Facility Information, (D) Discharge Information, (E) SWPPP Information, and (F) Certifier Name and Title. All of these changes help to clarify permit eligibility and monitoring requirements were adopted by ADEQ. The changes include:

- Section A, Application Revision – Permittees are requested to submit an “application revision” whenever there is a change to information submitted on the initial NOI under this permit.
- Section B, Facility Operator Information – Permittees are asked for the operator's e-mail address.
- Section C, Facility Information – Permittees may use one of three formats to provide latitude/longitude data. The form also asks for the estimated area of industrial activity at the site exposed to stormwater.
- Section D, Discharge Information – A new section on discharge information was added to Section D. The form asks clarifying questions about the receiving water including whether the water is impaired, the name of the impaired water, the pollutants for which the water is impaired, and whether a TMDL has been developed. For new or increased dischargers, the permittee must answer questions about whether the receiving water is considered an impaired or OAW waterbody. The form also asks which effluent limitation guidelines potentially apply. The new form requires the primary SIC or activity code. Space for up to six additional SIC codes is provided (addressing all the applicable sectors and subsectors for that facility). The form no longer asks for secondary SIC codes. The form asks whether the operator expects the site to be inactive and unstaffed during the permit term, and, if so, how long the site is expected to be inactive and unstaffed.
- Section E, SWPPP Contact Information – Permittees are asked to provide contact information for the SWPPP and confirm that the SWPPP has been developed and implemented.
- Section F, Certified Name and Title – Contact information on the NOI preparer is a new requirement, if the NOI was prepared by someone other than the certifier.

XIII.B. Notice of Termination

Part 1.4 of the permit requires permittees to submit a Notice of Termination within 30 calendar days after a new owner or operator assumes responsibility for a facility. Other situations may arise in which a permittee would be advised to submit an NOT.

XIII.C. Annual Reporting Form

Part 7.2 requires permittees with facilities that discharge to impaired waters or OAWs to submit an annual report using the Annual Reporting Form provided by the Department. This form asks for general information on the facility, summary findings from the comprehensive facility inspection (CFI), and a description of corrective actions taken and the status of follow-up repairs, maintenance activities, or new BMP installations. The Annual Reporting Form is also required for other permittees to document the CFI that do not discharge to impaired waters or OAWs, although they are only required to retain a copy with the SWPPP and submit a copy to ADEQ upon request. This establishes a consistent reporting format for permittees to use for the annual report. The Annual Report is a new requirement.