

# Storm Water Management Requirements for Mining Operations: Recent Developments and Compliance Initiatives

(Or How to Keep Your Head above  
Murky Water?)

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# Overview

- Mining Industry as an Enforcement Target
- “New” Multi-Sector General Permit

# Two Factors Driving the Mining Industry Enforcement Priority

- EPA's October 12, 2007 notice (72 FR 58084) announces increased enforcement for FY 2008-2010
- EPA's litigation and settlement regarding Massey Energy

# EPA's October 12, 2007 Notice

- Singles out stepped up enforcement for:
  - Mineral Processing Facilities Under RCRA
  - Entire storm-water program under the Clean Water Act (with particular emphasis on ready mix concrete with crushed stone and sand and gravel operations)

# Impact of Massey Energy Company Case

- Consent Decree:
    - Company wide;
    - Largest ever civil penalty (\$20mm) for alleged water discharge permit violations;
    - Internal tracking/compliance program to be implemented;
    - Establishment of 200 ac. conservation site;
    - 20 stream remediation projects (See <http://www.epa.gov/Compliance/resources/decrees/civil/cwa/massey-cd.pdf>)
- \*EPA Enforcement Office—Mining sector will remain a priority until compliance improves

# Expect an Increase in Inspection and Enforcement

- EPA Civil Judicial Enforcement Case Conclusions by Number of Facilities - increased from approx. 50 in FY 06 to approx. 230 in FY 07 – these resources are freed up for new enforcement actions
- The October 2007 enforcement priorities announcement and the Massey Case follow-on

# The New Multi-Sector General Permit for Industrial Activities

- Draft Permit issued December 1, 2005 (70 FR 72116)
- Proposed substantial new requirements on various mining sectors
- Final Permit signed on September 17, 2008
  - Effective upon Federal Register Publication on September 29, 2008 and expires on September 29, 2013
  - Contains substantial revisions from Draft Permit
  - Imposes substantial new obligations on the mining industry
  - Copy of Final Permit just received September 18
  - Permit is 239 pages and “Fact Sheet” is 147 pages

# Permit Structure

- Nine Parts:
  - Parts 1-7 apply to all facilities
  - Part 8 applies to the specified industry sectors
  - Part 9 sets out specific requirements that apply to individual States and Indian Country
- Eleven Appendices – lettered A-K, contain additional Permit conditions that apply to ALL operators under the Permit

# Part 1 - Permit Coverage

- Part 9 provides Permit is not available in Regions 4, 7 & 8 (See App. C.4, C.7 and C.8)
- Covers stormwater discharge “associated with industrial activity from...primary industrial activity, as defined in Appendix A,” provided the facility is listed in Appendix D (1.1.1(1))
- Or, EPA gives notice (1.1.1(2))

# Types of Waters Covered

- “*Stormwater*” - stormwater runoff, snow melt runoff and surface runoff and drainage
- “*Primary Industrial Activity*” - includes “any activities performed on-site which are...identified by the facility’s primary SIC code”
- “*Stormwater Discharges Associated with Industrial Activity*” - discharge from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under Part 122

# Mining Related Facilities Listed in Appendix D

- Sector E: Glass, Clay, Cement, Concrete and Gypsum Products
- Sector F: Primary Metals
- Sector G: Metal Mining (Ore Mining and Dressing)
- Sector H: Coal Mines and Coal Mining-Related Facilities
- Sector J: Mineral Mining and Dressing

## Examples of Allowable Non-Stormwater Discharges Under the Permit (1.1.3):

- Potable water, including water line flushings
- Uncontaminated condensate from air conditioners, coolers and other compressors and from the outside storage of refrigerated gases or liquids
- Landscape watering provided all pesticides, herbicides and fertilizer have been applied in accordance with the approved labeling

# Examples of Allowable Non-Stormwater Discharges Under the Permit (1.1.3): (cont)

- Pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed)
- Routine external building washdown that does not use detergents
- Uncontaminated ground or spring water

# Stormwaters Not Covered by Permit:

- Stormwater discharges that are mixed with non-stormwater, other than those non-stormwater discharges listed in Part 1.1.3. (1.1.4.1)
- Stormwater discharges associated with construction activity disturbing one acre or more unless in conjunction with mining activities as specified in Sectors G (Metal Mining), H (Coal Mines and Coal Mining-Related Facilities) and J (Non-Metallic Mineral Mining and Dressing) of the Permit (1.1.4.2)

# Endangered and Threatened Species and Critical Habitat Protection Exclusion (1.1.4.5)

- Permit applies only if stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities will not adversely affect any species that are federally-listed as endangered or threatened under the Endangered Species Act (ESA) and will not result in the adverse modification or destruction of habitat that is federally-designated as “critical habitat”
- Certain criteria must be met in order to assure that either there is no ESA problem or the matters have been adequately addressed (and must follow procedures in Appendix E)

# Historic Properties Preservation Protection (1.1.4.6)

- Coverage under the Permit is available only if stormwater discharges, allowable non-stormwater discharges, and stormwater discharge related activities meet one of the eligibility criteria described in this section (must follow procedures in Appendix F)

# Obtaining the Permit 9 (1.3.1):

- To obtain authorization under the Permit:
  - Be located where EPA is the permitting authority;
  - Meet the Part 1.1 eligibility requirements;
  - Select, design, install and implement control measures in accordance with Part 2.1 to meet numeric and non-numeric effluent limits;
  - Submit a complete and accurate Notice of Intent (NOI) (can file electronically or “analog”);
  - Develop a Stormwater Pollution Prevention Plan (SWPPP) in accord with Part 5

## The SWPP and its Contents (Part 5):

- Prepare SWPPP for your facility before submitting NOI
- Identify stormwater pollution prevention team, including titles and responsibilities (Part 5.1.1);
- Include site description (Part 5.1.2);
- Provide summary of potential pollutant sources (Part 5.1.3);
- Describe control measures (Part 5.1.4);
- Include required schedules and procedures (Part 5.1.5);
- Include documentation to support eligibility considerations under other federal laws eg. ESA, historic resources, NEPA (see Part 5.1.6); and
- Sign it! (Part 5.1.7)

# Monitoring, Reporting and Record Keeping Requirements under SWPPP:

- Part 4 sets out the scope and frequency of required inspections, including inspection documentation requirements (see 4.3.2)
- Part 6 specifies location, type and frequency, including exceptions dealing with inactive or unstaffed sites (6.2.1.3)
- Part 7 describes reporting and record keeping requirements
  - EPA gets monitoring data (7.1), annual report (7.2), & exceedance report, when necessary (7.3)

# Control Measures

- Section 2.1 – Permittee is to select, design, install and implement control measures (including best management practices) to:
  - Address the selection and design considerations in Part 2.1.1
  - Meet the non-numeric effluent limits in Part 2.1.2;
  - And meet limits contained in applicable effluent limitations guidelines in Part 2.1.3 (some mining operations limits are included there)
  - The selection, design, installation and implementation of these control measures must be in accordance with good engineering practices and mfr's specs

# Sector Specific Requirements

- Part 8 applies to areas of a facility where the sector-specific activities occur, as well as any co-located industrial activities (as noted above, these are in addition to any requirements specified elsewhere in the Permit)

# Sector Specific Requirements- Subpart E--Glass, Clay, Cement, Concrete and Gypsum Products

- Imposes additional good housekeeping, SWPPP requirements and sector specific benchmarks and effluent limitations including:
  - Additional benchmark monitoring cut off concentrations for:
    - Clay manufacturers for total aluminum at 75mg/L
    - Concrete and gypsum product manufacturers for:
      - TSS at 100 mg/L; and
      - Total Iron at 1 mg/L

# Sector Specific Requirements- Subpart E--Glass, Clay, Cement, Concrete and Gypsum Products (cont)

- Additional effluent limitations based on effluent limitations guidelines for material storage piles at cement manufacturing facilities for:
  - pH of 6-9; and
  - TSS at 50 mg/L, daily maximum

# Sector Specific Requirements – Subpart G—Metal Mining

- Permit applies to metal mining facilities that discharge stormwater contaminated by contact with, or that has come into contact with, any overburden, raw material, intermediate product, finished product, byproduct or waste product located on the site of the operation (8.G.1)
- Imposes technology-based effluent limits for clearing, grading and excavation activities (8.G.4), additional SWPPP requirements (8.G.6), inspection requirements (8.G.7)

# Additional Benchmark Monitoring Requirements for Discharges from Waste Rock and Overburden Piles at Active Metal Mining Facilities:

- Discharges from waste rock and overburden piles:
  - Perform benchmark monitoring once in the first year for the parameters listed in Table 8.G-2 (covering 12 metals – 6 with hardness adjustments, plus pH, TSS and turbidity) & twice annually in all subsequent years if any parameters in benchmark list are exceeded
  - Conduct analytic monitoring for the parameters listed in Table 8.G-3 for specified metals (including hardness), TSS and pH for the specified types of ore mining (See 8.G.6.3)

\* EPA may impose additional monitoring

# Sector Specific Requirements – Subpart H—Coal Mines and Coal Mining-Related Facilities

- Imposes additional housekeeping (8.H.5), SWPPP (8.H.6), inspection (8.H.7) and benchmarks for total aluminum, total iron and TSS (8.H.8)

# Sector Specific Requirements – Subpart J—Non-Metallic Mineral Mining and Dressing

- Imposes technology-based effluent limits for clearing, grading and excavation activities (8.J.4), including additional inspection requirements (8.J.4.2);
- Additional SWPPP requirements (8.J.6);
- Imposes sector specific benchmarks for:
  - Sand and Gravel Mining for TSS of 100 mg/L and nitrates plus nitrites of .68mg/L;
  - Dimension and Crushed Stone and Nonmetallic Minerals (except fuels) for TSS of 100 mg/L

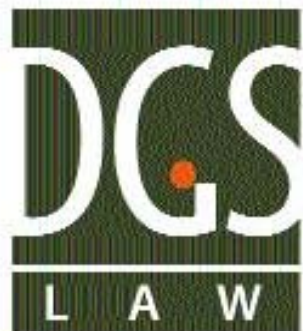
# Sector Specific Requirements – Subpart J—Non Metallic Mineral Mining and Dressing

- Compliance effluent limits to be determined based on discharges independent of commingling with any other wastestreams that may be covered under the Permit
- For mine dewatering discharges at crushed stone mining facilities, construction sand and gravel mining facilities, a pH of 6-9
- For industrial sand mining facilities the additional requirement to meet 45 mg/L daily maximum and 25 mg/L monthly average TSS standards

# Conclusion

- Greater EPA scrutiny of the mining industry
- Many new and more onerous requirements under the MSGP
- More discipline and diligence will be required by the mining industry

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