



# **Effluent Guidelines An Update**

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**2007 National Pretreatment & Pollution  
Prevention Workshop**

November 14, 2007



# What is the ELG Planning Process?

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- To date, 56 ELGs have been promulgated, most under a series of consent decrees. Last regulation under consent decree was signed on June 30, 2004.
- Section 304(m) of the Clean Water Act (CWA) requires EPA to perform an annual review of existing ELGs and to issue a biennial plan identify existing ELGs for revision, or new ELGs rulemaking for previously unregulated industries (304m Plan). Notice and public comment is required before the final 304m Plan.
- Section 304(g) of the CWA requires EPA to annually review pretreatment standards and revise, if appropriate.
- Post consent decree, 304m/g ELG Plans were issued in 2004 and 2006. The 2008 Preliminary 304m/g Plan was published on October 30, 2007.



# 2006 ELG plan

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- Published in Dec. 2006
- Decisions on
  - Pulp, Paper and Paperboard (not picked)
  - Tobacco Products (not picked)
- Still working on ELGs mentioned in 2004 plan
  - Drinking Water Facilities (new)
  - Airport Deicing Operations (new)
  - CCH (revision of ELGs for Organic Chemicals, Plastics and Synthetic Fibers, and Inorganic Chemicals)
- Will continue to study steam electric industry
- Will start to study the following industries
  - Coalbed Methane
  - Coal Mining
  - Health Services



# Status of Current Guidelines

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- Airport Deicing
  - New category listed in 2004 ELG plan
  - 20 site visits; 6 sampling trips
  - ICR approved; survey responses by airports and airlines being analyzed
  - Proposed rule in 2008
- Chlorine and Chlorinated Hydrocarbons (formerly “Vinyl Chloride”)
  - Revisions of two existing categories; listed in 2004 ELG plan
  - 13 site visits, 4 sampling trips; ICR submitted to OMB
  - Pursuing industry-conducted voluntary sampling plan to better characterize dioxin discharges



# More on ELG Status

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- Construction and Development
  - New category listed in 2000 ELG plan
  - Dec. 2006 order from Central District of CA (9<sup>th</sup> Circuit); followed earlier decision by Court that EPA must do an ELG if industry is listed in the 304m plan
    - Proposed rule by Dec. 2008
    - Final rule by Dec. 2009
  - On track to comply with Court's schedule
  - EPA has appealed the District Court decision to the 9<sup>th</sup> Circuit
- Drinking Water Regulations
  - New category listed in 2004 ELG plan
  - 18 site visits
  - ICR approved; survey responses being analyzed
  - Proposed rule in 2008



# Steam Electric

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- Why is EPA studying the steam electric industry?
  - Steam electric power industry (40 CFR Part 423) discharges large amounts of toxic-weighted pollutants, consistently ranking second-highest among all industry sectors.
  - Wastewater discharges of metals, the largest contributors of toxic-weighted pollutants, may increase measurably over the next 5-10 years as plants install new air pollution control systems if adequate treatment technologies are not implemented.
- Scope
  - Concentrating on types of plants and wastewaters that contribute the majority of toxic-weighted pollutant discharges.
    - Coal-fired plants with wet scrubbers (flue gas desulfurization, or FGD, systems).
    - Wastewater discharges from wet FGD systems and ash ponds.
  - Characterizing pollutants present in the wastewater discharges and evaluating treatment technologies.



# More on Steam Electric

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## □ Status

- Collecting data through a variety of mechanisms:
  - Site visits - 13 plants visited to date;
  - Wastewater sampling of FGD wastewater and ash ponds – 5 plants sampled; one more planned;
  - Survey of 30 coal-fired plants;
  - Industry compilation of NPDES information; and
  - Vendor contacts and literature review.



# Coalbed Methane

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- Why is EPA studying Coalbed Methane (CBM)?
  - Higher natural gas prices and advances in drilling technology have helped prompt recent CBM development.
  - In 2004, CBM accounted for about 10.4% of the total U.S. natural gas production and is expanding in multiple basin across the U.S.; DOE/EIA expects CBM production to remain an important source of the domestic natural gas
  - EPA received comments from public interest groups on this industry sector in the 2004 and 2006 304m Plans.
    - **Tongue River Water Users' Association** requested protection of the Tongue River's existing sodium levels so that it can continue to be used for irrigation.
    - **NRDC** cited the need for consistent, national regulations instead of state-determined permitting based on BPJ.
    - **Cook Inlet Keeper** commented on the 2003 annual review that EPA should expand its examination of available data on the impacts of CBM-produced water discharges.



# More on CBM

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- The quality of CBM produced water will vary; some impacts can be severe; some CBM produced water can be used for beneficial use. Key controls are TDS and Sodium Adsorption Ratio (SAR).
  - **Eastern U.S.:** TDS concentrations typically range from 500 to 27,000 mg/L with some wells over 50,000 mg/L.
  - **Western U.S.:** TDS concentrations range from 400 to 2,000 mg/L (Powder River Basin), 9,000 to 11,000 mg/L (Wind River), to approximately 50,000 mg/L (San Juan Basin).
- Focus of study is industry ICR survey, will need to stratify survey to examine basin-specific information.



# CBM Outreach and Schedule

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- Conducted a series of seven 90 minute teleconferences in June and July with about 120 stakeholders to provide an overview of the project
- Site visits in AL, WV, PA, WY, MT, CO, NM just completed. Also met with stakeholders from State and governments, Tribal governments, Federal agencies, public interest groups, treatment experts, and industry representatives.
- Schedule
  - Summer 2008 -- ICR approval and distribution of ICR to CBM producers
  - Fall 2009 – preliminary results



# Coal Mining

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- Why is EPA studying the Coal Mining industry?
  - Review of literature, treatment practices, and discharges at post-mining sites in Pennsylvania and West Virginia to address state and industry comments:
    - Current manganese effluent limits are more stringent than necessary to protect aquatic life and domestic surface water supplies of drinking water.
    - The additional expense of manganese treatment is causing companies to default on reclamation bonds.
    - Over-dosages and spills of sodium hydroxide used to treat manganese have killed aquatic life.
  - We are also reviewing public interest group concerns about discharges of pollutants for which there are no current discharge limits, such as sulfate, chloride, mercury, cadmium, and selenium.



# More on Coal Mining

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- Conducted two site visits in PA and WVA. Plan to do additional PA site visit.
- Schedule
  - FY2007: Completed most data collection and industry profile. Began analysis of bonding and forfeiture issues, estimates of treatment costs and discharge loads, and water quality impacts.
  - FY2008: Complete analyses started in FY2007 and produce final report by June 2008.



# Health Services

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- Part of 304(g) review for indirect dischargers
- Why is EPA studying the Health Services industry?
  - Commentors raised concerns about dental mercury and contaminants of emerging concern
  - Not enough information on potential for pass through/interference
- Scope
  - Mercury discharges from dentists
  - Un-used or expired pharmaceutical discharges to POTWs from hospitals, long-term care facilities, and veterinarians



# More on Health Services

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- Focus on highlighting industry best practices
- Information gathering
  - Federal, state and local laws
  - Current and best practices; technologies; extent of use
  - Discharge estimates
  - Impacts on POTWs



## Recent Court Decision on 2004 ELG Plan

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- Environmental litigants appealed to the 9<sup>th</sup> Circuit a District Court decision favorable to EPA
- 9<sup>th</sup> Circuit opinion issued Oct. 29, 2007
  - Technology-based factors must be considered in planning process and annual review
    - Remanded case to District Court to determine if EPA considered technology-based factors
  - EPA has discretion to determine the number and kind of new categories that are listed in the 304m Plan
  - EPA's timing of the 304m Plan was upheld



# More on ELGs

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- Frequently Asked Questions for Centralized Waste Treatment Facilities issued Dec. 2006
- Extensive web site revisions, [www.epa.gov/waterscience/guide](http://www.epa.gov/waterscience/guide), recently posted
- 2008 Preliminary 304m Plan published on Oct. 30
  - No new or existing categories identified
  - Status of detailed studies
  - 60-day comment period



# Contacts

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- ❑ 304m ([johnston.carey@epa.gov](mailto:johnston.carey@epa.gov), 202-566-1014)
- ❑ Airport Deicing ([strassler.eric@epa.gov](mailto:strassler.eric@epa.gov), 202-566-1026)
- ❑ C and D ([pritts.jesse@epa.gov](mailto:pritts.jesse@epa.gov), 202-566-1038)
- ❑ CCH ([lewis.samantha@epa.gov](mailto:lewis.samantha@epa.gov), 202-566-1058)
- ❑ CBM ([johnston.carey@epa.gov](mailto:johnston.carey@epa.gov), 202-566-1014)
- ❑ Coal Mining ([born.tom@epa.gov](mailto:born.tom@epa.gov), 202-566-1001)
- ❑ Drinking Water ([born.tom@epa.gov](mailto:born.tom@epa.gov), 202-566-1001)
- ❑ Health Services ([hessenauer.meghan@epa.gov](mailto:hessenauer.meghan@epa.gov), 202-566-1040)
- ❑ Steam Electric ([jordan.ronald@epa.gov](mailto:jordan.ronald@epa.gov), 202-566-1003)