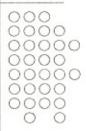
Eastman Kodak Major Source Permit

Sarah Chavez, Intel June 20, 2007



History

 Eastman Kodak referred by Region 6 EPA as the only major source for the semiconductor MACT requirements





- Produces photographic films, chemicals, digital media and equipment
- · Located in Rochester, NY
- Started in 1891
- Over 1,100 acre site with 22 miles of fenceline
- 125 manufacturing buildings, 30 miles of roads, two power plants, own sewer system and wastewater treatment facility
- Considers 13,000 households and 550 businesses to be plant neighbors
- · Air emissions
 - 2004 SARA emissions 2.9 million pounds
 - 2004 power plant emissions (SO2, CO, NOx, particulates, VOCs)
 58.9 million pounds
- http://www.kodak.com/US/plugins/acrobat/en/corp/HSE/KPHSE_ 2005.pdf

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Eastman Kodak Major Source Permit



- Permit available online http://www.dec.ny.gov/dardata/boss/afs/issued_atv_ h.html
- Two permits and two permit review reports over 1400 pages
- Regulated by New York State Region 8
- Facility has ~55 emission units (EU) listed in permits
- Facility emissions summary has a potential to emit (PTE) list of chemicals
 - Appears to have entire federal HAPs list most w/ >=10tpy
 - CO, NOx, SO2, Particulates, VOC each >=250 tpy

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Semiconductor Manufacturing at Eastman Kodak



- · Listed as U00020 with 10 emissions points and 3 processes
- ~35,000 square feet of cleanroom space originally built in the 70's
- Subject to maximum achievable control technology (MACT)
 - . No emissions control units, i.e. no thermal oxidizers, no scrubbers
 - Will meet MACT concentration limits of 20 ppmv for organics and 0.42 ppmv for inorganics
- No compliance testing
 - demonstrate compliance via engineering assessments, other monitoring and emissions calculations, semiannual reports
- Subject to NY State reasonable available control technology requirements (RACT) for cold cleaning degreasers which
 - Limits annual VOC emissions on a rolling 12 month basis
 - Requires specific emissions calculations
 - Requires semiannual reporting
 - · Specifies operational requirements
- Had a best available control technology (BACT) requirement for HF that is no longer applicable

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Requirements for Other Sources at Eastman Kodak



- Do have control equipment on other operations
 - · RTO, scrubbers, absorbers, carbon adsorption systems, etc.
 - Mainly put in place to meet limits for state BACT and RACT requirements
- · Generally there are no concentration limits at the stack
- · Generally there are no short term limits for pollutants
 - NY State air toxic program that requires modeling and could trigger additional requirements
- · Continuous emissions monitoring
 - For opacity on power plant and hazardous waste incinerator
 - To ensure removal efficiency on acetate film based manufacturing carbon adsorber system and the solvent recovery system
- Semiannual compliance report that summarizes compliance with all conditions in permit
- · Excursion reporting
- · Annual NY State Emissions survey
- Intermittent testing listed for some sources, i.e.
 - Once per year for mercury from a chemical waste incinerator
 - · As requested for particulates from polyester film based manufacturing
 - For batch synthetic chemical manufacturing lists operational and maintenance items as intermittent testing
- Used to have a full staff to complete all testing but have outsourced more in the last few years – smaller footprint, cost savings

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