Digest of Selected EPA Regulations:
Perspectives on Technology Opportunities and Ideas
September, 2009 Draft

This digest was abstracted from the EPA Spring 2009 Regulatory Agenda (145 pages plus appendices) by Region 5 staff. The full Agenda is available at: *http://www.epa.gov/lawsregs/documents/regagendabook-spring09.pdf*.

Background Note: The following is a selection of EPA rules in various stages of development that may have implications for new market opportunities for technology developers. Short notes on the subject of the regulation and its possible relevance for venture capitalists and technology developers were prepared with assistance from USEPA contacts listed in the regulatory agenda. This is not a complete list. Region 5 staff is working with other contacts referenced in the regulatory agenda to expand this listing. One can search for details of individual rules by their RIN number (the number appearing at the beginning of each listing) at http://www.reginfo.gov/public/do/eAgendaSimpleSearch

Air

2060-AP36: NESHAPS for Reciprocating Internal Combustion Engines, proposed rule stage.
This rule would reduce pm2.5 and black carbon and require "catalyzed diesel particulate filters" or other emission approaches**.** If finalized the rule would require emission limits that may necessitate the use of aftertreatment control devices such as oxidation catalyst or catalyzed diesel particulate filters. Opportunities for these types of control technologies may exist.

Contact: Melanie King, king.melanie@epa.gov

2060-ASO15: Portland Cement Notice of Reconsideration, proposed rules stage.
"Speciated mercury testing" is requested of four facilities. The Portland Cement NESHAP reconsideration will be completed sometime next year and all facilities will need to be in compliance sometime in 2013. In the proposed rule, EPA estimated that the cement industry will be spending over a billion dollars in capital costs for emissions controls and monitoring equipment for the following pollutants: mercury, total hydrocarbons, hydrochloric acid, and particulate matter. There would be an opportunity for any firm that makes cost effective controls and monitoring equipment for these pollutants that would be applicable to a cement kiln.

Contact: Keith Barnett, barnett.keith@epa.gov

2060-AO81: Renewable Fuels Standard Program, proposed rule stage.
The RFS2 program, once finalized, will require significant volumes of cellulosic and other advanced biofuels from other than cornstarch. The program may be of interest to investors. The website with the proposal is at http://www.epa.gov/otaq/renewablefuels/. For more information on the RFS2 program, read Section II.A of the proposal.

Contact: David Korotney, korotney.david@epa.gov

2060-AO38: Control of Emissions from New Marine Compression-Ignition Engines at or above 30 Liters per Cylinder, proposed rule stage,
This rule involves new aftertreatement technology and low sulfur diesel fuel. The coordinated strategy for Category 3 marine vessels will require technology (potentially, but not necessarily

after treatment) to reduce NOx emissions from these large engines. As an alternative to fuel switching, the IMO standards allow for "equivalent technology" as an alternative. The technology most often considered here is exhaust gas SOx scrubbers. Several companies are also looking at developing exhaust gas monitoring equipment for ships.

Contact: Michael Samulski, samulski.michael@epa.gov

2060-AK03: Performance Based Measurement System for Fuels, proposed rule stage.
This rule provides criteria to self qualify measurement methods for fuels.
The intent of the Performance Based Analytical Test Method Approach (PBATMA) proposal is to establish criteria for the qualification of alternative test methods to measure properties of gasoline and diesel fuel. Existing and new measurement technologies may be able to qualify once this PBATMA approach is implemented. EPA anticipates that a proposed rule will be available for comment in 2010.

Contact: Joe Sopata, sopata.joe@epa.gov

2060-AL98: Alternative Work Practice for Leak Repair and Detection, completed action.
This rule allows an alternative approach for monitoring emissions of VOCs and HAPs under CAA through use of image based monitoring technology. Equipment for the purpose may be needed. To implement this rule, an optical imaging device (IR camera) will be needed.

Contact: Jodi Howard, howard.jodi@epa.gov

Water

2040-AE69: Effluent Limitations Guidelines and Standards for Airport Deicing Operations, proposed rule stage.
This rule involves control of pollutants used in deicing fluids. The rule would require airports, which are the largest users of aircraft deicing fluid to capture a specified percentage of the used fluid, and treat the wastewater. The captured wastewater may also be sent off-site, to either a municipal sewage treatment plant or commercial waste treatment facility. The principal pollutants of concern are propylene glycol and ethylene glycol, which are the active ingredients in most aircraft deicing fluids. The glycol recovered from some airports is recycled and sold for use in manufacturing other chemical products. The waste treatment technologies may be of interest to investors and some airports may be new customers for the recycling industry.

Contact: Eric Strassler, strassler.eric@epa.gov

2040-AE84: Drinking Water Regulations for Aircraft Public Water Systems, final rule stage. This rule is tailored for aircraft water systems to assure that water on board aircraft is safe for passengers and crew. Unlike traditional water systems, aircraft water systems are mobile and may board water from many different sources, some of which are outside of US jurisdiction. Reliance is placed on best management practices with periodic monitoring. This could allow creation of businesses to provide technology for aircraft related to best management practices, monitoring, and other support.

Contact: Richard Naylor, naylor.richard@epa.gov

2040-AD87: NPDES Requirements for Peak Wet Weather Discharges from Publicly Owned Treatment Work Treatment Plants Serving Sanitary Sewer Collection Systems Policy, long term action.

This rule may require new equipment for wet weather blending or other equipment to deal with peak flows. Some questions to be addressed are: Advanced physical/chemical units – What pathogens are associated with which units? Issues include optimization of wet-weather treatment operations and feasible technologies to detect sewer overflows in timely manner.

Contact: Mohammed Billah, billah.mohammed@epa.gov

2040-AF03: Development of Best Management Practices for Recreational Boats, long term action.
This rule begins a three-phase process of regulatory development. The regulations may ultimately address concerns related to invasive species and may encourage technology development for cleaning of hulls, etc. Investors might find opportunities to play a part in the development of these technologies, which also will likely be spurred on by current state regulations and programs with respect to recreational vessel hull cleaning to control invasives.

Contact: John Lishman, lishman.john@epa.gov

Resource Conservation and Recovery Act

2050-AE51: Modifications to RCRA rules for Solvent Contaminated Wipes, final rule stage.
This rule could affect the business of providing, cleaning, and disposing of solvent wipes. Under this rule, EPA will require generators to remove solvent from the wipes. No single technology is specified, leaving it to the generator to find the best method for removing the solvent. Options include laundering and burning - both incineration and for energy, and landfill disposal. The development of new ways to reuse and dispose of the wipes may provide an opportunity. The launderable or "reusable" wipes were excluded from the definition of hazardous waste.

Contact: Teena Wooten, wooten.teena@epa.gov

2050-AE87 Revisions to the National Oil and Hazardous Substance Contingency Plan, long term action.
This rule requires that EPA prepare a schedule of dispersants and other chemicals used for spill mitigation. The methods used to test products may change. Opportunities for improved products may exist.

Contacts: Nick Nichols and Leigh DeHaven, nichols.nick@epa.gov and dehaven.leigh@epa.gov.

2050-AG39 Amendment to the Universal Waste Rule: Addition of Pharmaceuticals, long term action.
EPA has proposed to add hazardous pharmaceutical wastes to the federal universal waste program. If finalized, this addition will facilitate the proper management of hazardous pharmaceutical wastes by streamlining the current RCRA requirements for the generators of these wastes. In addition, the rule encourages generators to dispose of non-hazardous pharmaceutical waste as a universal waste, thereby removing this unregulated waste from wastewater treatment plants and municipal solid waste landfills. The addition of hazardous pharmaceutical waste to the Universal Waste Rule will also facilitate the collection of personal medications from the public at various facilities so that they can be more properly managed. (See: http://www.epa.gov/epawaste/hazard/wastetypes/universal/pharm.htm for more information). The inclusion of hazardous pharmaceuticals may increase demand for management of pharmaceutical wastes, including collection of pharmaceutical wastes via take back programs.

Contact: Lisa Lauer, lauer.lisa@epa.gov

2050-AG34 Revisions to the Land Disposal Treatment Standards and Amendments to Recycling Requirements for Spent Petroleum Refining Hydrotreating and Hydrorefiining Catalysts, long term action.
This rule or subsequent rules may alter demand for the recycling of spent catalysts used in petroleum refining.

Contact: Ross Elliot, elliott.ross@epa.gov