

# User Guide Index for EPA-HQ-OW-2014-0170 - Final 2014 Plan

<i>RECORD SECTION</i>	<i>DOCUMENT ID NUMBER</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
06.4	EPA-HQ-OW-2014-0170-0209	The 2014 Annual Effluent Guidelines Review Report - DCN 08106	The report containing the analyses completed during the 2014 Annual Review.	Publication; USEPA	U.S. EPA	07/01/2015	U.S. EPA. 2015. The 2014 Annual Effluent Guidelines Review Report. Washington D.C. (July).	118	No	No	08106
06.4	EPA-HQ-OW-2014-0170-0210	Final 2014 Effluent Guidelines Program Plan - DCN 08107	Final 2014 Plan for the Industrial Effluent Guidelines Program	Publication; USEPA	U.S. EPA	07/01/2015	U.S. EPA. 2015. Final 2014 Effluent Guidelines Program Plan. Washington D.C. (July).	50	No	No	08107
06.4	EPA-HQ-OW-2014-0170-0211	The 2014 Annual Effluent Guidelines Review Report Appendices A - H - DCN 08119	Appendices supporting the 2014 Annual Review Report	Publication USEPA	U.S. EPA	07/01/2015	U.S. EPA. 2015. The 2014 Annual Effluent Guidelines Review Report Appendices A - H. Washington D.C. (July).	74	No	No	08119

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07.12	EPA-HQ-OW-2014-0170-0208	Response to Comments for the Preliminary 2014 Effluent Guidelines Program Plan - DCN 08110	This document contains EPA's responses to the public comments received on the Preliminary 2014 Effluent Guidelines Program Plan (Preliminary 2014 Plan). The Preliminary 2014 Plan, which EPA is required to develop by Section 304(m) of the Clean Water Act (	Publication; USEPA	U.S. EPA	07/01/2015	U.S. EPA. 2015. Response to Comments for the Preliminary 2014 Effluent Guidelines Program Plan. Washington D.C. (July).	117	No	No	08110
09.2	EPA-HQ-OW-2014-0170-0203	Technical Users Background Document for the Discharge Monitoring Report (DMR) Pollutant Loading Tool, Version 1.0 - DCN 08105	User guide for the Discharge Monitoring Report (DMR) Pollutant Loading Tool.	Publication; USEPA	U.S. EPA	01/01/2012	U.S. EPA. 2012. Technical Users Background Document for the Discharge Monitoring Report (DMR) Pollutant Loading Tool. Version 1.0. Washington, D.C. (January).	143	No	No	08105
10.16	EPA-HQ-OW-2014-0170-0138	Federal Register Notice: Effluent Guidelines and Standards; Electroplating Point Source Category Pretreatment Standards for Existing Sources - DCN 08039	FR Notice for the Electroplating Point Source Category pretreatment standards for existing sources (40 CFR Part 413).	Publication; USEPA	U.S. EPA	01/28/1981	U.S. EPA. 1981. Federal Register Notice: Effluent Guidelines and Standards; Electroplating Point Source Category Pretreatment Standards for Existing Sources. Washington, D.C. (January).	13	No	No	08039

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10.31	EPA-HQ-OW-2014-0170-0096	A Study of Zinc-Nickel as an Alternate Coating to Cadmium for Electrical Connector Shells Used in Aerospace Applications - DCN 08032	This report presents results of a study aimed to investigate the ability of zinc nickel coatings to provide adequate corrosion protection and electromagnetic interference shielding for circular connectors used in aerospace applications and in comparison t	Publication; Copyrighted Materials	Ogunayo Ogundiran	04/01/2011	Ogundiran, O. 2011. A Study of Zinc-Nickel as an Alternate Coating to Cadmium for Electrical Connector Shells Used in Aerospace Applications. (April).	90	No	Yes	08032
10.31	EPA-HQ-OW-2014-0170-0112	Treatment of electroplating wastewater containing Cu <sub>2+</sub> , Zn <sub>2+</sub> and Cr(VI) by electrocoagulation - DCN 08004	The performance of electrocoagulation, with aluminum sacrificial anode, in the treatment of metal ions (Cu <sub>2+</sub> , Zn <sub>2+</sub> and Cr(VI)) containing wastewater, has been investigated. Several working parameters, such as pH, current density and metal ion concentratio	Publication; Copyrighted Materials	Nafaa Adhoum	04/02/2004	Adhoum, N. L. Monser, N. Belakal, and J-E Belgaied. 2004. Treatment of electroplating wastewater containing Cu <sub>2+</sub> , Zn <sub>2+</sub> and Cr(vi) by electrocoagulation. Journal of Hazardous Materials. B112: 207-213.	7	No	Yes	08004
10.31	EPA-HQ-OW-2014-0170-0113	Pilot-scale removal of chromium from industrial wastewater using the chromebac system - DCN 08005	The enzymatic reduction of Cr(VI) to Cr(III) by Cr(VI) resistant bacteria followed by chemical precipitation constitutes the ChromeBac™ system. Acinetobacter haemolyticus was immobilized onto carrier material inside a 0.2 m3 bioreactor.	Publication; Copyrighted Materials	Wan Azlina Ahmad	06/01/2010	Ahmad, W.A., et al. 2010. Pilot-scale removal of chromium from industrial wastewater using the chromebac system. Bioresource Technology. 101 (12): 4371-4378. (June).	8	No	Yes	08005

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10.31	EPA-HQ-OW-2014-0170-0114	Metal recovery and wastewater reduction using electrowinning - DCN 08007	Electrowinning is an electrolytic technology used to recover metals from electroplating rinse waters. Although electrowinning has traditionally been used only for metal recovery, its application in a well designed and controlled rinse system can signifi	Publication	L. Bloch	01/01/2000	Bloch, L. 2000. Metal recovery and wastewater reduction using electrowinning. Products Finishing. (January 1).	4	No	No	08007
10.31	EPA-HQ-OW-2014-0170-0115	Treatment of oily wastes by membrane biological reactor - DCN 08008	Wastewater from Marathon Ashland Petroleum's barge cleaning and repair terminal operations contains elevated concentrations of many pollutants. This paper discusses a wastewater characterization study completed using a membrane bioreactor to treat the was	Publication; Copyrighted Materials	J. Buckles	10/11/2003	Buckles, J. A., et al. 2003. Treatment of oily wastes by membrane biological reactor. Water Environment Federation's 2003 Technical Exhibition and Conference. Los Angeles, CA. (October 11-15).	13	No	Yes	08008
10.31	EPA-HQ-OW-2014-0170-0116	Close loop for zero waste water discharge, Epner Technology Inc - DCN 08009	Presentation discussing close loop for zero wastewater discharge at metal finishing facilities.	Speech	S. Candiloro	05/17/2012	Candiloro, S. 2012. Close loop for zero waste water discharge, Epner Technology Inc. (May 17).	24	No	No	08009

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10.31	EPA-HQ-OW-2014-0170-0117	The future of finishing - DCN 08010	The report looks at recent trends in three crucial areas of the metal finishing industry: economics, environmental regulations, and technology.	Publication	Paul Chalmer	01/01/2008	Chalmer, P. 2008. The future of finishing. National Center for Manufacturing Services. (January 1).	65	No	No	08010
10.31	EPA-HQ-OW-2014-0170-0118	Recovery and recycling of industrial side-stream wastewater - DCN 08011	Most industrial operations generate a substantial quantity of "side-stream" wastes. These streams are characterized by their high concentrations and difficult-to-treat property. Recent studies have identified side-stream wastes as a major cause of perform	Publication; Copyrighted Materials	Michael Chan	11/13/2011	Chan, M. 2011. Recovery and recycling of industrial side-stream wastewater. International Water Conference. Orlando, FL. (November 13-17).	6	No	Yes	08011
10.31	EPA-HQ-OW-2014-0170-0119	Electrochemical technologies in wastewater treatment - DCN 08012	This paper reviews the development, design and applications of electrochemical technologies in water and wastewater treatment. Particular focus was given to electrodeposition, electrocoagulation (EC), electroflotation (EF) and electrooxidation.	Publication; Copyrighted Materials	Guohua Chen	01/01/2004	Chen, G. 2004. Electrochemical technologies in wastewater treatment. Separation and Purification Technology. 38: 11-41.	31	No	Yes	08012

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10.31	EPA-HQ-OW-2014-0170-0120	Biosorption and recovery of chromium from industrial wastewaters by using saccharomyces cerevisiae in a flow-through system - DCN 08013	This study investigated the possibility to adsorb and recycle Cr(VI) from the wastewater of a Cr-electroplating process using Saccharomyces cerevisiae in a flow-through system at a pilot scale.	Publication; Copyrighted Materials	Giovanni Colica, Pier Cesare Mecarozzi, Ro	03/08/2012	Colica, G. et al. 2012. Biosorption and recovery of chromium from industrial wastewaters by using saccharomyces cerevisiae in a flow-through system. Industrial & Engineering Chemistry Research. 51 (11): 4452-4457. (March	6	No	Yes	08013
10.31	EPA-HQ-OW-2014-0170-0121	Graphene nanocomposite coatings for protecting low-alloy steels from corrosion - DCN 08014	As the advanced manufacturing industry in the United States rejuvenates, sustainable processes and materials will be increasingly important.1,2 New materials will offer opportunities for new solutions to old problems. Graphene and carbon nanotubes represe	Publication	Robert Dennis, Lasantha Viyannalage, Anil	01/01/2014	Dennis, R. et al. 2014. Graphene nanocomposite coatings for protecting low-alloy steels from corrosion. American Ceramic Society Bulletin. 92 (5): 18-24.	7	No	No	08014
10.31	EPA-HQ-OW-2014-0170-0122	Non-phosphate transition metal coatings, 81st universal metal finishing guidebook - DCN 08015	Traditional iron phosphate and zinc phosphate conversion coatings have been used for more than a century as pretreatments for painting over a variety of metals. These "legacy" phosphate pretreatments have served well; however, environmental regulations ha	Publication; Copyrighted Materials	Bruce Dunham and David Chalk	09/01/2013	Dunham, B. D. Chalk. 2013. Non-phosphate transition metal coatings, 81st universal metal finishing guidebook. Metal Finishing Magazine. 111 (7): 116-122. (Fall).	7	No	Yes	08015

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10.31	EPA-HQ-OW-2014-0170-0123	Treatment of metal finishing wastewater from aircraft maintenance operations using an electrocoagulation treatment process - DCN 08017	Hill Air Force Base performs repair and maintenance on a variety of aircraft. Because of its breadth of industrial operations, much of the industrial wastewater generated at Hill Air Force Base is subject to specific metal discharge concentration limits f	Publication; Copyrighted Materials	Forough Firouzi, Mark A. Ross, Gordon Cham	01/01/2009	Firouzi, F. et al. 2009a. Treatment of metal finishing wastewater from aircraft maintenance operations using an electrocoagulation treatment process. Microconstituents and Industrial Water Quality. 8: 473-480.	8	No	Yes	08017
10.31	EPA-HQ-OW-2014-0170-0124	Treatment of metal finishing wastewaters in the presence of chelating substances - DCN 08018	Hill Air Force Base, Utah (Hill AFB) performs repair and maintenance on a variety of aircraft including the F-16, A-10 and C-130 as well as other weapon systems. To comply with the local pretreatment standards, Hill AFB is evaluating a number of novel tec	Publication; Copyrighted Materials	Forough Firouzi, Mark A. Ross, Gordon Cham	10/10/2009	Firouzi, F. 2009b. Treatment of metal finishing wastewaters in the presence of chelating substances. WEF 2009 Technical Exhibition and Conference. Orlando, FL. (October 10-14).	6	No	Yes	08018
10.31	EPA-HQ-OW-2014-0170-0125	Needs more work - DCN 08019	Electrocoagulation has promise as a metals-removal technology but needs more research and development.	Publication; Copyrighted Materials	Forough Firouzi, Mark A. Ross, Gordon Cham	04/01/2010	Firouzi, F. 2010. Needs more work. Industrial Wastewater. 10-12. (April/May).	3	No	Yes	08019

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10.31	EPA-HQ-OW-2014-0170-0126	Zirconium pretreatments: Not just for early adopters anymore - DCN 08021	Zirconium oxide conversion coatings have proven to be excellent replacements for iron phosphate pretreatments in recent years. The substantial performance, operational, and environmental benefits have been well documented.	Publication; Copyrighted Materials	David Hopwood	07/01/2012	Hopwood, D. 2012. Zirconium pretreatments: Not just for early adopters anymore. Metal Finishing: The Plating and Coating Industries' Technology Magazine. 110 (6): 18-21. (July/August).	60	No	Yes	08021
10.31	EPA-HQ-OW-2014-0170-0127	Treatment of manganese-phosphate coating wastewater by electrocoagulation - DCN 08023	The effective performance of the electrocoagulation (EC) technique in removing manganese, phosphate, and iron from rinse water from a Mn-PO4 (MPO) coating plant was investigated using sacrificial aluminum electrodes in original pH.	Publication; Copyrighted Materials	Mahir Ince	01/18/2013	Ince, M. 2013. Treatment of manganese-phosphate coating wastewater by electrocoagulation. Separation Science and Technology. 48: 515-522. (January 18).	9	No	Yes	08023
10.31	EPA-HQ-OW-2014-0170-0128	Going low-temp - DCN 08025	In recent years, metal finishers have been introduced to a variety of new technologies for prepaint metal pretreatment systems, touting environmental benefits and energy cost savings. The new chemical treatment processes go by several generic names such a	Publication	Donald LaFlamme	01/01/2009	LaFlamme, D. 2009. Going low-temp. Products Finishing. (January 1). Available online at: <a href="http://www.pfonline.com/articles/going-low-temp">http://www.pfonline.com/articles/going-low-temp</a> .	4	No	No	08025

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10.31	EPA-HQ-OW-2014-0170-0129	Chrome Replacements for Internals and Small Parts - DCN 08026	Discusses hard chrome usage and a summary of replacement criteria and options along with process summaries.	Publication	Keith O. Legg		Legg, K. n.d. Rowan Technology Group. Chrome Replacements for Internals and Small Parts.	90	No	No	08026
10.31	EPA-HQ-OW-2014-0170-0130	Use of high-pressure CO2 for concentrating CrVI from electroplating wastewater by Mg-Al layered double hydroxide - DCN 08027	The desorption of CrVI from CrVI-adsorbed layered double hydroxide (CrVI-LDH) and the recycling of layered double hydroxide adsorbent are the bottlenecks that limit the practical application of layered double hydroxide in treating CrVI-containing industri	Publication; Copyrighted Materials	Xiangying Lv, Zhi Chen, Yongjing Wang, Fen	10/01/2013	Lv, X. Z. et al. 2013. Use of high-pressure CO2 for concentrating CrVI from electroplating wastewater by Mg-Al layered double hydroxide. Applied Materials & Interfaces. 5 (21): 11271-11275. (October 1).	5	No	Yes	08027
10.31	EPA-HQ-OW-2014-0170-0131	Removal of cadmium from industrial effluents by electrocoagulation process using aluminum electrodes - DCN 08028	The object of this study is evaluation of cadmium removal from industrial wastewater by electrocoagulation process. For this study a glass tank in 1.56 liter volume with four plate electrode was used to do experiments. At the end of each stage of experime	Publication; Copyrighted Materials	Amir Hossein Mahvi and Edriss Bazrafshan	01/01/2007	Mahvi, M.H. E. Bazrafshan. 2007. Removal of cadmium from industrial effluents by electrocoagulation process using aluminum electrodes. World Applied Sciences Journal. 2 (1): 34-39.	6	No	Yes	08028

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10.31	EPA-HQ-OW-2014-0170-0132	Non-chromated conversion coating for magnesium alloys and zinc-nickel plated steel - DCN 08029	A novel hexavalent chromate-free conversion coating was developed to improve anti-corrosion and adhesive-bonding characteristics of the magnesium alloys and zinc-nickel (Zn-Ni) plated steel substrates.	Publication	Alp Manavbasi	11/13/2012	Manavbasi, A. 2012. Non-chromated conversion coating for magnesium alloys and zinc-nickel plated steel. Products Finishing. (November 13).	7	No	No	08029
10.31	EPA-HQ-OW-2014-0170-0133	Waste minimization and recovery technologies, 81st universal metal finishing guidebook - DCN 08030	This article reviews a number of well-demonstrated and proven chemical recovery methods, collectively known as separation technologies, for reducing or in some cases reversing bath drag-out.	Publication; Copyrighted Materials	W.J. McLay	09/01/2013	McLay, W.J. 2013. Waste minimization and recovery technologies, 81st universal metal finishing guidebook. Metal Finishing Magazine. 111 (7): 595-619. (Fall).	25	No	Yes	08030
10.31	EPA-HQ-OW-2014-0170-0134	A pilot study for reclamation of a combined rinse from a nickel-plating operation using a dual-membrane UF/RO process - DCN 08033	A pilot study for reclamation of a combined rinse from a nickel-plating operation was conducted using a dual-membrane UF/RO process.	Publication; Copyrighted Materials	Jian-Jun Qin, Maung Nyunt Wai, Maung Htun	02/20/2004	Qin, J-J. et al. 2004. A pilot study for reclamation of a combined rinse from a nickel-plating operation using a dual-membrane UF/RO process. Desalination. 161 (2): 155-167. (February 20).	13	No	Yes	08033

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10.31	EPA-HQ-OW-2014-0170-0135	Pilot study on the treatment of spent solvent cleaning rinse in metal plating - DCN 08034	Pilot trials on a spent solvent cleaning rinse from a nickel-plating operation were conducted using polyacrylonitrile hollow-fiber UF membranes. The results indicated that the membrane pore size and operating conditions were important factors for treating	Publication; Copyrighted Materials	Jian-Jun Qin, Maung Htun Oo, Fook-Sin Wong	05/10/2006	Qin, J-J. M.H. Oo and F.S. Wong. 2006. Pilot study on the treatment of spent solvent cleaning rinse in metal plating. Desalination. 191: 359-364. (May 10).	6	No	Yes	08034
10.31	EPA-HQ-OW-2014-0170-0136	Nitrogen and DOC removal from wastewater streams of the metal-working industry - DCN 08037	Production-related variations of the boron- and dissolved organic carbon-concentrations in the permeates of ultrafiltration of cooling lubricants prevented the establishment of a nitrification of ammonia, that was released during denitrification with ethan	Publication; Copyrighted Materials	R. Schuch, R. Gensicke, K. Merkel, and J.	01/01/2000	Schuch, R. R. Gensicke, K. Merkel, and J. Winter. 2000. Nitrogen and DOC removal from wastewater streams of the metal-working industry. Water Research. 34 (1): 295-303. (January).	9	No	Yes	08037
10.31	EPA-HQ-OW-2014-0170-0137	Optimization of oily wastewater membrane bioreactor treatment: Pilot to full scale results - DCN 08038	In the early 1990s, the General Motors Corporation (GM) adopted the use of the membrane biological reactor (MBR) process configuration for full scale treatment of manufacturing plant wastewaters in the US and internationally. Pilot plant studies were com	Publication; Copyrighted Materials	Paul Sutton, Prakash Mishra, Jeff Roberts,	10/13/2001	Sutton, P.M. et al. 2001. Optimization of oily wastewater membrane bioreactor treatment: Pilot to full scale results. Water Environment Federation's 2001 Technical Exposition and Conference. Atlanta, GA. (October 13-17).	24	No	Yes	08038

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10.31	EPA-HQ-OW-2014-0170-0139	Guidance Manual for Electroplating and Metal Finishing Pretreatment Standards - DCN 08040	Guidance Manual for Electroplating (40 CFR Part 413) and Metal Finishing (40 CFR Part 433) Pretreatment Standards.	Publication; USEPA	U.S. EPA	02/01/1984	U.S. EPA. 1984. Guidance Manual for Electroplating and Metal Finishing Pretreatment Standards. Washington, D.C. (February).	73	No	No	08040
10.31	EPA-HQ-OW-2014-0170-0140	Functional Trivalent Chromium Plating Process to Replace Hexavalent Chromium Plating - DCN 08041	With support from the Environmental Protection Agency's (EPA) Small Business Innovation Research (SBIR) Program, Faraday Technology, Inc., has developed a cost competitive functional trivalent chromium (Cr+3) plating process to replace hexavalent chromium	Publication; USEPA	U.S. EPA	01/01/2013	U.S. EPA. 2013. EPA Small Business Innovation Research (SBIR) Program. 2013 Presidential Green Chemistry Award Winner – Faraday Technology, Inc. Functional Trivalent Chromium Plating Process to Replace Hexavalent Chromium Plating.	2	No	No	08041
10.31	EPA-HQ-OW-2014-0170-0141	The use of liquid-liquid extraction for heavy metals recovery and reuse from plating wastewaters - DCN 08042	Metals treatment and recovery from plating wastewater is important to protect the environment and to provide cost-effective alternatives to waste disposal. Battelle has developed alternative processes, using liquid-liquid extraction (LLX), to specifically	Publication; Copyrighted Materials	Paul J. Usinowicz, Bruce Monzyk, H. Nichol	10/30/2005	Usinowicz, P.J. et al. 2005. The use of liquid-liquid extraction for heavy metals recovery and reuse from plating wastewaters. WEF TEC 2005. Washington D.C. (October 30 - November 2).	11	No	Yes	08042

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10.31	EPA-HQ-OW-2014-0170-0142	Wastewater treatment, 81st universal metal finishing guidebook - DCN 08043	This paper discusses the status of wastewater regulations, wastewater treatment selection criteria, and conventional methods of wastewater treatment in the metal finishing industry.	Publication; Copyrighted Materials	Thomas Weber	09/01/2013	Weber, T. 2013. Wastewater treatment, 81st universal metal finishing guidebook. Metal Finishing Magazine. 111 (7): 582-594. (Fall).	15	No	Yes	08043
10.31	EPA-HQ-OW-2014-0170-0143	New coating for aluminum developed to replace cancer-causing product - DCN 08044	A materials engineering research team has developed a new environmentally-friendly self-healing coating for aluminum to replace the carcinogenic chromate coatings used in defense and aerospace applications.	Press Release, Public Announcement/ Notice	M. Wolterbeek	01/01/2012	Wolterbeek, M. 2012. New coating for aluminum developed to replace cancer-causing product. Nevada Today. University of Nevada, Reno.	5	No	No	08044
10.31	EPA-HQ-OW-2014-0170-0144	A pilot study on a membrane process for the treatment and recycling of spent final rinse water from electroless plating - DCN 08045	A hybrid process that includes microfiltration, UV irradiation, carbon adsorption, nanofiltration and ion exchange for treating and recycling spent final rinse water from an electroless plating operation has been developed.	Publication; Copyrighted Materials	F.S. Wong	10/01/2002	Wong, F.S. et al. 2002. A pilot study on a membrane process for the treatment and recycling of spent final rinse water from electroless plating. Separation and Purification Technology. 29 (1): 41-51. (October).	11	No	Yes	08045

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10.42	EPA-HQ-OW-2014-0170-0107	Email Communication Between Richard Keigwin, U.S. EPA Office of Pesticide Programs, and William Swietlik, U.S. EPA Office of Water. Re: Questions for OPP About Pesticides - DCN 07996	Email communication between Richard Keigwin, U.S. EPA OPP and William Swietlik, U.S. EPA OW about questions for OPP on pesticides.	Meeting Materials	Richard Keigwin	04/30/2014	Keigwin, Richard. 2014. Email Communication Between Richard Keigwin, U.S. EPA OPP, and William Swietlik, U.S. EPA Office of Water. Re: Questions for OPP About Pesticides. (April 30).	7	No	No	07996
10.42	EPA-HQ-OW-2014-0170-0108	Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) - DCN 07997	The objective of FIFRA is to provide federal control of pesticide distribution, sale, and use. All pesticides used in the U.S. must be registered (licensed) by EPA.	Publication; USEPA	U.S. EPA	03/30/2012	U.S. EPA. 2012. Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Washington, D.C. (March 30). Available online at: <a href="http://www.epa.gov/agriculture/lfra.html">http://www.epa.gov/agriculture/lfra.html</a> .	9	No	No	07997
10.42	EPA-HQ-OW-2014-0170-0109	Instructions for Completing EPA Form 3540-16 Pesticide Report for Pesticide-Producing and Device-Producing Establishments, Reporting Year 2013 - DCN 07998	List of instructions for completing the EPA form 3540-16 for pesticide-producing and device-producing establishments.	Publication; USEPA	U.S. EPA	01/01/2013	U.S. EPA. 2013. Instructions for Completing EPA Form 3540-16 Pesticide Report for Pesticide-Producing and Device-Producing Establishments, Reporting Year 2013.	9	No	No	07998

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10.42	EPA-HQ-OW-2014-0170-0110	Chapter 1: Overview of Requirements for Pesticide Registration and Registrant Obligations in the Pesticides Registration Manual - DCN 07999	Chapter 1 of the Pesticides Registration Manual.	Publication; USEPA	U.S. EPA	06/26/2014	U.S. EPA. 2014. Pesticide Registration Manual: Chapter 1: Overview of Requirements for Pesticide Registration and Registrant Obligations. (June 26).	20	No	No	07999
10.43	EPA-HQ-OW-2014-0170-0212	304m DMR Data for the Petroleum Refining Industry - DCN 08111	Database compiling DMR data for the petroleum industry for reporting years 2000, 2004, 2007, 2008, and 2009, used to support EPA's 2011 and 2012 Effluent Guidelines Annual Review Reports.	Data	Kim Bartell, ERG and Liz Gentile, ERG	04/15/2015	ERG. 2015. 304m DMR Data for the Petroleum Refining Industry. (April 15).	0	No	No	08111
10.43	EPA-HQ-OW-2014-0170-0213	304m TRI Data for the Petroleum Refining Industry - DCN 08112	Database compiling TRI data for the petroleum industry for reporting years 2004, 2005, 2007, 2008, and 2009, used to support EPA's 2011 and 2012 Effluent Guidelines Annual Review Reports.	Data	Kim Bartell, ERG and Liz Gentile, ERG	04/15/2015	ERG. 2015. 304m TRI Data for the Petroleum Refining Industry. (April 15).	0	No	No	08112

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10.43	EPA-HQ-OW-2014-0170-0214	Data Dictionary for the 304m DMR and TRI Databases for the Petroleum Refining Industry - DCN 08113	Data dictionary describing the datasets included in the 304m DMR and TRI databases for the petroleum refining industry (DCNs 08111 and 08112).	Data	Kim Bartell, ERG and Liz Gentile, ERG	04/15/2015	ERG. 2015. Data Dictionary for the 304m DMR and TRI Databases for the Petroleum Refining Industry. (April 15).	8	No	No	08113
10.43	EPA-HQ-OW-2014-0170-0215	DMR and TRI Detailed Study Petroleum Data for Industry – DCN 08114	Database compiling the DMR and TRI data for the petroleum industry for reporting years 2007 through 2013 to support the petroleum detailed study.	Data	Lori Weiss, ERG	04/21/2015	ERG. 2015. DMR and TRI Detailed Study Petroleum Data for Industry. (April 21).	0	No	No	08114
11.06	EPA-HQ-OW-2014-0170-0205	ERG. 2014. Eastern Research Group, Inc. Engineered Nanomaterials in Industrial Wastewater: Literature Review and Implications for 304m. (September) - DCN 08108	This memorandum presents an overview of engineered nanomaterials (ENMs), production methods, and potential waste streams, as well as the status of research into their environmental fate and toxicity. It also describes the status and availability of analyt	Memorandum	Eastern Research Group, Inc	01/23/2015	ERG. 2014. Eastern Research Group, Inc. Engineered Nanomaterials in Industrial Wastewater: Literature Review and Implications for 304m. (December).	36	No	No	08108

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11.6	EPA-HQ-OW-2014-0170-0145	Photo-enhanced toxicity of nano-titanium dioxide (anatase) on freshwater zooplankton - DCN 08046	Discussion of toxicity of nano-titanium dioxide on freshwater zooplankton.	Publication; Copyrighted Materials	M. Alloy, A Roberts	11/15/2012	Alloy, M., & Roberts, A. 2012. Photo-enhanced toxicity of nano-titanium dioxide (anatase) on freshwater zooplankton. Proceedings from the SETAC 33rd Annual Meeting, Long Beach, California.	5	No	Yes	08046
11.6	EPA-HQ-OW-2014-0170-0146	Impacts of silver nanoparticle coating on the nitrification potential of nitrosomonas europaea - DCN 08047	Silver nanoparticles (AgNPs) are increasingly used as bacteriostatic agents to prevent microbial growth. AgNPs are manufactured with a variety of coatings, and their potential impacts on wastewater treatment in general are poorly understood.	Publication; Copyrighted Materials	C. Arnaout, C. Gunsch	04/25/2012	Arnaout, C. L., & Gunsch, C. K. (2012). Impacts of silver nanoparticle coating on the nitrification potential of nitrosomonas europaea. Environmental Science & Technology, 46(10): 5387-5395.	2	No	Yes	08047
11.6	EPA-HQ-OW-2014-0170-0147	Effects of TiO2 nanoparticles on the growth and metabolism of three species of freshwater algae - DCN 08048	Examination of how TiO2 nanoparticles impact the growth and metabolism of three species of freshwater green algae that are widespread throughout North America.	Publication; Copyrighted Materials	B. Cardinale, R. Bier, C. Kwan	07/14/2012	Cardinale, B. J., Bier, R., & Kwan, C. 2012. Effects of TiO2 nanoparticles on the growth and metabolism of three species of freshwater algae. Journal of Nanoparticle Research, 14(8): 1-8.	2	No	Yes	08048

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11.6	EPA-HQ-OW-2014-0170-0148	Comparison of the photosensitivity and bacterial toxicity of spherical and tubular fullerenes of variable aggregate size - DCN 08049	Nanomaterials such as fullerene C60, carbon nanotubes (CNTs), and other fullerenes show unique electrical, chemical, mechanical, and thermal properties that are not well understood in the context of the environmental behavior of this class of carbon-based	Publication; Copyrighted Materials	S. Chae, M. Therezien, J. Budarz, L. Wesse	07/15/2011	Chae, S. R. et al. 2011. Comparison of the photosensitivity and bacterial toxicity of spherical and tubular fullerenes of variable aggregate size. Journal of Nanoparticle Research, 13: 5121-5127.	3	No	Yes	08049
11.6	EPA-HQ-OW-2014-0170-0149	Low concentrations of silver nanoparticles in biosolids cause adverse ecosystem responses under realistic field scenario - DCN 08050	A large fraction of engineered nanomaterials in consumer and commercial products will reach natural ecosystems. To date, research on the biological impacts of environmental nanomaterial exposures has largely focused on high-concentration exposures in mech	Publication	Benjamin Colman, Christina Arnaout, Sarah	02/27/2013	Colman, B. P. et al. 2013. Low concentrations of silver nanoparticles in biosolids cause adverse ecosystem responses under realistic field scenario. PLoS ONE, 8(2), e57189.	10	No	No	08050
11.6	EPA-HQ-OW-2014-0170-0150	Antimicrobial effects of commercial silver nanoparticles are attenuated in natural streamwater and sediment - DCN 08051	Discussion of the effects of commercial silver nanoparticles in natural streamwater and sediment.	Publication; Copyrighted Materials	Benjamin Colman, S. Wang, M. Auffan, Emily	05/09/2012	Colman, B. P. et al. 2012. Antimicrobial effects of commercial silver nanoparticles are attenuated in natural streamwater and sediment. Ecotoxicology, 21(7): 1867-1877.	7	No	Yes	08051

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11.6	EPA-HQ-OW-2014-0170-0151	Modeling nanosilver transformations in freshwater sediments - DCN 08052	Silver nanoparticles (AgNPs), an effective antibacterial agent, are a significant and fast-growing application of nanotechnology in consumer goods. The toxicity of AgNPs released to surface waters during the use or disposal of AgNP-containing products wil	Publication; Copyrighted Materials	Amy Dale, Gregory Lowry, Elizabeth Casman	11/19/2013	Dale, A. L. et al. 2013. Modeling nanosilver transformations in freshwater sediments. Environmental Science & Technology, 47(22): 12920-12928.	2	No	Yes	08052
11.6	EPA-HQ-OW-2014-0170-0152	Transformation of PVP coated silver nanoparticles in a simulated wastewater treatment process and the effect on microbial communities - DCN 08053	Investigation of the fate of AgNPs in sludge subjected to aerobic and anaerobic treatment and the impact of AgNPs on microbial processes and communities.	Publication; Copyrighted Materials	Casey Doolette, Mike McLaughlin, Jason Kir	03/04/2013	Doolette, C. L. et al. 2013. Transformation of PVP coated silver nanoparticles in a simulated wastewater treatment process and the effect on microbial communities. Chemistry Central Journal, 7(1): 46.	36	No	Yes	08053
11.6	EPA-HQ-OW-2014-0170-0153	New perspectives on nanomaterial aquatic ecotoxicity: Production impacts exceed direct exposure impacts for carbon nanotubes - DCN 08054	Environmental impacts due to engineered nanomaterials arise both from releases of the nanomaterials themselves as well as from their synthesis. In this work, the USEtox mode is used to quantify and compare aquatic ecotoxicity impacts over the life cycle o	Publication; Copyrighted Materials	M. Eckelman, M. Mauter, J. Isaacs, M. Elim	01/18/2012	Eckelman, M. J. et al. 2012. New perspectives on nanomaterial aquatic ecotoxicity: Production impacts exceed direct exposure impacts for carbon nanotubes. Environmental Science & Technology, 46(5): 2902-2910.	9	No	Yes	08054

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11.6	EPA-HQ-OW-2014-0170-0154	Sampling and Analysis of Nanomaterials in the Environment: A State-Of-The-Science Review - DCN 08055	A review to identify and assess currently available sampling and analysis methods to identify and quantify the occurrence of nanomaterials in the environment.	Report	ERG	08/29/2008	ERG. 2008. Eastern Research Group, Inc. Sampling and Analysis of Nanomaterials in the Environment: A State-Of-The-Science Review [Final Report]. (August).	62	No	No	08055
11.6	EPA-HQ-OW-2014-0170-0155	Engineered Nanomaterials EndNote Reference Library Export - DCN 08056	A list of references EPA has collected during its literature review and investigation of the environmental implications of engineered nanomaterials in industrial wastewater discharge.	Report	ERG	08/28/2014	ERG. 2014. Eastern Research Group, Inc. Engineered Nanomaterials EndNote Reference Library Export. (August).	0	No	No	08056
11.6	EPA-HQ-OW-2014-0170-0156	Silver nanoparticles: Behaviour and effects in the aquatic environment - DCN 08058	This review summarizes and evaluates the present knowledge on the behavior, the biological effects and the routes of uptake of silver nanoparticles (Ag NPs) to organisms, with considerations on the nanoparticle physicochemistry in the ecotoxicity testing	Publication; Copyrighted Materials	Julia Fabrega, Samuel Luoma, Charles Tyler	12/14/2010	Fabrega, J. et al. 2011. Silver nanoparticles: Behaviour and effects in the aquatic environment. Environment International. 37(2): 517-531.	16	No	Yes	08058

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11.6	EPA-HQ-OW-2014-0170-0157	Life cycle assessment at nanoscale: Review and recommendations - DCN 08059	Evaluation of how the nano-specific environmental assessments are being done within the existing framework of life cycle inventory and impact assessment and whether these frameworks are valid and/or whether they can be modified for nano-evaluations.	Publication; Copyrighted Materials	Sheetal Gavankar, Sangwon Suh, Arturo Kell	01/11/2012	Gavankar, S. et al. 2012. Life cycle assessment at nanoscale: Review and recommendations. The International Journal of Life Cycle Assessment. 17(3): 295-303.	9	No	Yes	08059
11.6	EPA-HQ-OW-2014-0170-0158	The release of engineered nanomaterials to the environment - DCN 08060	There is scientific agreement that engineered nanomaterial (ENM) production, use and disposal lead to environmental release of ENM. However, very little is known on emissions of ENM to the environment.	Publication; Copyrighted Materials	F. Gottschalk, B. Nowack	01/28/2011	Gottschalk, F., & Nowack, B. 2011. The release of engineered nanomaterials to the environment. Journal of Environmental Monitoring. 13(5): 1145-1155.	11	No	Yes	08060
11.6	EPA-HQ-OW-2014-0170-0159	Modeled environmental concentrations of engineered nanomaterials (TiO <sub>2</sub> , ZnO, Ag, CNT, fullerenes) for different regions - DCN 08061	In this study, predicted environmental concentrations (PEC) were calculated based on a probabilistic material flow analysis from a life-cycle perspective of ENM-containing products.	Publication; Copyrighted Materials	F. Gottschalk, T. Sonderer, R. Scholz, B.	09/11/2009	Gottschalk, F. et al. 2009. Modeled environmental concentrations of engineered nanomaterials for different regions. Environmental Science & Technology. 43(24): 9216-9222.	7	No	Yes	08061

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11.6	EPA-HQ-OW-2014-0170-0160	Environmental assessment of single-walled carbon nanotube processes - DCN 08062	The environmental assessment of nanomanufacturing during the initial process design phase should lead to the development of competitive, safe, and environmentally responsible engineering and commercialization. Three single-walled carbon nanotubes (SWNTs)	Publication; Copyrighted Materials	Meagan Healy, Lindsay Dahlben, Jacqueline	09/05/2008	Healy, M. L. et al. 2008. Environmental assessment of single-walled carbon nanotube processes. Journal of Industrial Ecology. 12(3): 376-393.	18	No	Yes	08062
11.6	EPA-HQ-OW-2014-0170-0161	TiO2 nanoparticle exposure and illumination during zebrafish development: Mortality at parts per billion concentrations - DCN 08063	Discussion of titanium dioxide nanoparticle exposure and toxicity during zebrafish development.	Publication; Copyrighted Materials	W. Heideman, O. Bar-Ilan, R. Peterson, J.	11/15/2012	Heideman, W. et al. 2012. TiO2 nanoparticle exposure and illumination during zebrafish development: Mortality at parts per billion concentrations. Proceedings from the SETAC 33rd Annual Meeting, Long Beach, California.	5	No	Yes	08063
11.6	EPA-HQ-OW-2014-0170-0162	Estimating production data for five engineered nanomaterials as a basis for exposure assessment - DCN 08064	The magnitude of engineered nanomaterials (ENMs) being produced and potentially released to the environment is a crucial and thus far unknown input to exposure assessment. This work estimates upper and lower bound annual United States production quantities	Publication; Copyrighted Materials	Christine Hendren, Xavier Mesnard, Jocelyn	03/10/2011	Hendren, C. et al. 2011. Estimating production data for five engineered nanomaterials as a basis for exposure assessment. Environmental Science & Technology. 45: 2562-2569.	15	No	Yes	08064

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11.6	EPA-HQ-OW-2014-0170-0163	Telephone Communication between Michael Hochella, Virginia Tech, and Eva Knoth and Kim Wagoner, Eastern Research Group, Inc. Re: Request for Information on Nanomaterials Research - DCN 08065	Telephone communication between Michael Hochella, Virginia Tech, and Eva Knoth and Kim Wagoner, Eastern Research Group, Inc. about information on nanomaterials research.	Meeting Materials	Michael Hochella	03/15/2013	Hochella, M. F., Jr. 2013. Telephone Communication between M. Hochella, Virginia Tech, and E. Knoth and K. Wagoner, ERG. Re: Request for Information on Nanomaterials Research.(March 15).	2	No	No	08065
11.6	EPA-HQ-OW-2014-0170-0164	Nanominerals, mineral nanoparticles, and earth systems - DCN 08066	Minerals are more complex than previously thought because of the discovery that their chemical properties vary as a function of particle size when smaller, in at least one dimension, than a few nanometers.	Publication; Copyrighted Materials	Michael Hochella Jr., Steven Lower, Patric	03/21/2008	Hochella, M. F. Jr. et al. 2008. Nanominerals, mineral nanoparticles, and earth systems. Science. 319(5870): 1631-1635.	5	No	Yes	08066
11.6	EPA-HQ-OW-2014-0170-0165	Characterization and environmental implications of nano - and larger TiO2 particles in sewage sludge, and soils amended with sewage sludge - DCN 08067	Titanium dioxide (TiO2) is the most extensively used engineered nanoparticle to date, yet its fate in the soil environment has been investigated only rarely and is poorly understood. In the present study, two field-scale investigations were conducted to b	Publication; Copyrighted Materials	B. Kim, M. Murayama, B. Colman, M. Hochell	02/20/2012	Kim, B. et al. 2012. Characterization and environmental implications of nano- and larger TiO2 particles in sewage sludge. Journal of Environmental Monitoring. 14(4): 1128-1136.	3	No	Yes	08067

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11.6	EPA-HQ-OW-2014-0170-0166	Discovery and characterization of silver sulfide nanoparticles in final sewage sludge products - DCN 08068	Nanosized silver sulfide particles were identified in the final stage sewage sludge materials of a full-scale municipal wastewater treatment plant using analytical high-resolution transmission electron microscopy.	Publication; Copyrighted Materials	B. Kim, C. Park, M. Murayama, M. Hochella	09/01/2010	Kim, B. et al. 2010. Discovery and characterization of silver sulfide nanoparticles in final sewage sludge products. Environmental Science & Technology. 44(19).	6	No	Yes	08068
11.6	EPA-HQ-OW-2014-0170-0167	Environmental transformations of silver nanoparticles: Impact on stability and toxicity - DCN 08069	Silver nanoparticles (Ag-NPs) readily transform in the environment, which modifies their properties and alters their transport, fate, and toxicity. It is essential to consider such transformations when assessing the potential environmental impact of Ag-NP	Publication; Copyrighted Materials	Clément Levard, E. Matt Hotze, Gregory Low	02/16/2012	Levard, C. et al. 2012. Environmental transformations of silver nanoparticles: Impact on stability and toxicity. Environmental Science & Technology.	2	No	Yes	08069
11.6	EPA-HQ-OW-2014-0170-0168	Sulfidation processes of PVP-coated silver nanoparticles in aqueous solution: Impact on dissolution rate - DCN 08070	Despite the increasing use of silver nanoparticles (Ag-NPs) in nanotechnology and their toxicity to invertebrates, the transformations and fate of Ag-NPs in the environment are poorly understood. This work focuses on the sulfidation processes of PVP-coate	Publication; Copyrighted Materials	Clément Levard, Brian Reinsch, F. MarcMic	05/20/2011	Levard, C. et al. 2011. Sulfidation processes of PVP-coated silver nanoparticles in aqueous solution: Impact on dissolution rate. Environmental Science & Technology. 45(12): 5260-5266.	2	No	Yes	08070

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11.6	EPA-HQ-OW-2014-0170-0169	Effects of dominant material properties on the stability and transport of TiO2 nanoparticles and carbon nanotubes in aquatic environments: from synthesis to fate - DCN 08071	Recently, increasing studies have focused on the environmental stability, transport, and fate of the anthropogenic nanomaterials in the environment, which contributes to the understanding of the potential risks when released. The aim of this review is to	Publication; Copyrighted Materials	Xuyang Liu, Gexin Chen, Arturo Kellerb, Ch	11/13/2012	Liu, X. et al. 2013. Effects of dominant material properties on the stability and transport of TiO2 nanoparticles and carbon nanotubes in aquatic environments: from synthesis to fate. Environmental Science: Processes & Impacts. 15(1): 169-189.	21	No	Yes	08071
11.6	EPA-HQ-OW-2014-0170-0170	Long-term transformation and fate of manufactured Ag nanoparticles in a simulated large scale freshwater emergent wetland - DCN 08072	Transformations and long-term fate of engineered nanomaterials must be measured in realistic complex natural systems to accurately assess the risks that they may pose. Here, the long-term behavior of poly(vinylpyrrolidone)-coated silver nanoparticles in	Publication; Copyrighted Materials	Gregory Lowry, Benjamin Espinasse, Appala	04/01/2012	Lowry, G. V. et al. 2012. Long-term transformation and fate of manufactured Ag nanoparticles in a simulated large scale freshwater emergent wetland. Environmental Science & Technology. 46(13): 7027-7036.	2	No	Yes	08072
11.6	EPA-HQ-OW-2014-0170-0171	Transformations of nanomaterials in the environment - DCN 08073	Increasing use of engineered nanomaterials with novel properties relative to their bulk counterparts has generated a need to define their behaviors and impacts in the environment.	Publication; Copyrighted Materials	Gregory Lowry, Kelvin Gregory, Simon Apte,	05/14/2012	Lowry, G. V. et al. 2012. Transformations of nanomaterials in the environment. Environmental Science & Technology. 46(13): 6893-6899.	7	No	Yes	08073

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11.6	EPA-HQ-OW-2014-0170-0172	Fate of zinc oxide and silver nanoparticles in a pilot wastewater treatment plant and in processed biosolids - DCN 08074	Chemical transformations of silver nanoparticles (Ag NPs) and zinc oxide nanoparticles (ZnO NPs) during wastewater treatment and sludge treatment must be characterized to accurately assess the risks that these nanomaterials pose from land application of b	Publication; Copyrighted Materials	Rui Ma, Clément Levard, Jonathan Judy, Ja	11/22/2013	Ma, R. et al. 2013. Fate of zinc oxide and silver nanoparticles in a pilot wastewater treatment plant and in processed biosolids. Environmental Science & Technology.	9	No	Yes	08074
11.6	EPA-HQ-OW-2014-0170-0173	Exposure modeling of engineered nanoparticles in the environment - DCN 08075	The aim of this study was to use a life-cycle perspective to model the quantities of engineered nanoparticles released into the environment.	Publication; Copyrighted Materials	Nicole Mueller, Bernard Nowack	03/12/2008	Mueller, N. C., & Nowack, B. 2008. Exposure modeling of engineered nanoparticles in the environment. Environmental Science & Technology. 42(12): 4447-4453.	7	No	Yes	08075
11.6	EPA-HQ-OW-2014-0170-0174	Synthesis and study of silver nanoparticles - DCN 08076	A laboratory experiment is described in which students synthesize yellow colloidal silver, estimate particle size using visible spectroscopy, and study aggregation effects. This experiment introduces students to nanotechnology while reinforcing topics suc	Publication; Copyrighted Materials	Lorraine Mulfinger, Sally Solomon, Mozghan	02/07/2007	Mulfinger, L. et al. 2007. Synthesis and study of silver nanoparticles. Journal of Chemical Education. 84(2): 322.	4	No	Yes	08076

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11.6	EPA-HQ-OW-2014-0170-0175	Nanowastes and the environment: Potential new waste management paradigm - DCN 08077	Nanomaterial and nanoproducts have increased in quantity and volume from a few kilograms to thousands of tonnes over the last fifteen to twenty years, and their uncontrolled release into the environment is anticipated to grow dramatically in future. Howev	Publication; Copyrighted Materials	N. Musee	09/15/2010	Musee, N. 2011. Nanowastes and the environment: Potential new waste management paradigm. Environment International. 37(1): 112-128.	17	No	Yes	08077
11.6	EPA-HQ-OW-2014-0170-0176	Current Strategies for Engineering Controls in Nanomaterial Production and Downstream Handling Processes - DCN 08078	The focus of this document is to identify and describe strategies for the engineering control of worker exposure during the production or use of engineered nanomaterials.	Publication; Other Governmental	National Institute for Occupational Safety	11/01/2013	NIOSH. 2013. Current Strategies for Engineering Controls in Nanomaterial Production and Downstream Handling Processes. Cincinnati, OH. (Nov). DHHS Publication No. 2014-102.	96	No	No	08078
11.6	EPA-HQ-OW-2014-0170-0177	About the NNI - DCN 08079	The National Nanotechnology Initiative is a U.S. Government research and development initiative involving 20 departments and independent agencies working together toward the shared vision of "a future in which the ability to understand and control matter	Publication; Other Governmental	National Nanotechnology Initiative	01/01/2013	NNI. 2013. National Nanotechnology Initiative. About the NNI. Available online at: <a href="http://nano.gov/about-nni">http://nano.gov/about-nni</a> .	2	No	No	08079

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11.6	EPA-HQ-OW-2014-0170-0178	Standards for nanotechnology - DCN 08080	Discussion of existing standards for conducting measurements and defining performance standards pertaining to engineered nanomaterials.	Publication; Other Governmental	National Nanotechnology Initiative	01/01/2013	NNI. 2013. National Nanotechnology Initiative. Standards for nanotechnology. Available online at: <a href="http://nano.gov/you/s tandards">http://nano.gov/you/s tandards</a> .	2	No	No	08080
11.6	EPA-HQ-OW-2014-0170-0179	NSI: Nanotechnology for sensors and sensors for nanotechnology: Improving and protecting health, safety, and the environment - DCN 08081	The Nanotechnology Signature Initiative (NSI) Nanotechnology for Sensors and Sensors for Nanotechnology: Improving and Protecting Health, Safety, and the Environment is the fifth NSI to be launched by agencies of the National Nanotechnology Initiative (NN	Publication; Other Governmental	National Nanotechnology Initiative	01/01/2013	NNI. 2013. NSI: Nanotechnology for sensors and sensors for nanotechnology: Improving and protecting health, safety, and the environment.	5	No	No	08081
11.6	EPA-HQ-OW-2014-0170-0180	120 years of nanosilver history: Implications for policy makers - DCN 08082	Nanosilver is one nanomaterial that is currently under a lot of scrutiny. Much of the discussion is based on the assumption that nanosilver is something new that has not been seen until recently and that the advances in nanotechnology opened completely ne	Publication; Copyrighted Materials	Bernd Nowack, Harald Krug, Murray Height	01/10/2011	Nowack, B. et al. 2011. 120 years of nanosilver history: Implications for policy makers. Environmental Science & Technology. 45(4): 1177-1183.	7	No	Yes	08082

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11.6	EPA-HQ-OW-2014-0170-0181	National Nanotechnology Initiative Strategic Plan - DCN 08083	The NNI Strategic Plan outlines the broad goals of the Initiative and supports those goals by delineating specific objectives. It provides a framework to foster coordination and collaboration across agencies and serves as a guide for individual NNI member	Publication; Other Governmental	National Science and Technology Council, C	02/01/2014	NSET. 2014. National Nanotechnology Initiative Strategic Plan. Washington, D.C. (February).	88	No	No	08083
11.6	EPA-HQ-OW-2014-0170-0182	Guidance on Sample Preparation and Dosimetry for the Safety Testing of Manufactured Nanomaterials Series on the Safety of Manufactured Nanomaterials - DCN 08084	The unique properties of manufactured nanomaterials have raised the question as to whether the current Organisation for Economic Co-operation Development (OCED) Test Guidelines are adequate to appropriately address their characterization and the assessmen	Publication	Organization for Economic Co-operation and	12/18/2012	OECD. 2012. Guidance on Sample Preparation and Dosimetry for the Safety Testing of Manufactured Nanomaterials Series on the Safety of Manufactured Nanomaterials. (December 18).	93	No	No	08084
11.6	EPA-HQ-OW-2014-0170-0183	OSHA Fact Sheet: Working Safely with Nanomaterials - DCN 08085	This fact sheet provides basic information to workers and employers on the most current understanding of potential hazards associated with this rapidly-developing technology and highlights measures to control exposure to nanomaterials in the workplace.	Publication; Other Governmental	Occupational Safety and Health Administrat	04/01/2013	OSHA. 2013. Occupational Safety and Health Administration. OSHA Fact Sheet: Working Safely with Nanomaterials. Available online at: <a href="https://www.osha.gov/Publications/OSHA_FS-3634.pdf">https://www.osha.gov/Publications/OSHA_FS-3634.pdf</a> .	4	No	No	08085

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11.6	EPA-HQ-OW-2014-0170-0184	Potential release pathways, environmental fate, and ecological risks of carbon nanotubes - DCN 08086	The potential for negative effects caused by carbon nanotubes release into the environment is a prominent concern and numerous research projects have investigated possible environmental release pathways, fate, and toxicity.	Publication; Copyrighted Materials	Elijah J. Petersen, Liwen Zhang, Nikolai T	10/11/2011	Petersen, E. J. et al. 2011. Potential release pathways, environmental fate, and ecological risks of carbon nanotubes. Environmental Science & Technology. 45(23): 9837-9856.	20	No	Yes	08086
11.6	EPA-HQ-OW-2014-0170-0185	Consumer Products Inventory - DCN 08087	An inventory of nanotechnology-based consumer products introduced on the market.	Publication	Project on Emerging Nanotechnologies	09/01/2014	Project on Emerging Nanotechnologies. 2014. Consumer Products Inventory. Available online at: <a href="http://www.nanotechproject.org/cpi">http://www.nanotechproject.org/cpi</a> .	2	No	No	08087
11.6	EPA-HQ-OW-2014-0170-0186	Estimates of upper bounds and trends in nano-TiO2 production as a basis for exposure assessment - DCN 08088	An upper bound is estimated for the magnitude of potential exposure to nano-TiO2 with the purpose of enabling exposure assessment and, ultimately, risk assessment.	Publication; Copyrighted Materials	C.O. Robichaud	04/22/2009	Robichaud, C. O. et al. 2009. Estimates of upper bounds and trends in nano-TiO2 production as a basis for exposure assessment. Environmental Science & Technology. 43: 4227-4233.	7	No	Yes	08088

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11.6	EPA-HQ-OW-2014-0170-0187	SETAC North America 33rd Annual Meeting Abstract Book - DCN 08089	Abstract book for the Society of Environmental Toxicology and Chemistry North America 33rd Annual Meeting in Long Beach, California.	Publication; Copyrighted Materials	Society of Environmental Toxicology and Ch	11/15/2012	SETAC. 2012. Society of Environmental Toxicology and Chemistry. SETAC North America 33rd Annual Meeting Abstract Book. Long Beach, California. (November 15).	449	No	Yes	08089
11.6	EPA-HQ-OW-2014-0170-0188	Characterizing Concentrations and Size Distributions of Metal-Containing Nanoparticles in Waste Water - DCN 08090	Nanomaterials containing metals are finding increasing use in consumer, industrial, and medical products, and they are subsequently being released into the environment. This report describes recent progress in the development of new metrology tools.	Publication; USEPA	U.S. EPA	10/01/2010	U.S. EPA. 2010. Characterizing Concentrations and Size Distributions of Metal-Containing Nanoparticles in Waste Water. Washington, D.C. EPA/600/R-10/117.	56	No	No	08090
11.6	EPA-HQ-OW-2014-0170-0189	Nanomaterial Case Studies: Nanoscale Titanium Dioxide in Water Treatment and in Topical Sunscreen - DCN 08091	Discussion of what is known and what needs to be known about selected nanomaterials as part of a process to identify and prioritize research to inform future assessments of the potential ecological and health implications of these materials. Two applicati	Publication; USEPA	U.S. EPA	11/01/2010	U.S. EPA. 2010. Nanomaterial Case Studies: Nanoscale Titanium Dioxide in Water Treatment and in Topical Sunscreen. Washington, D.C. EPA/600/R-09/057F.	204	No	No	08091

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11.6	EPA-HQ-OW-2014-0170-0190	Nanotechnology Basic information - DCN 08092	Basic information about nanotechnology and EPA's role in its research.	Publication; USEPA	U.S. EPA	03/22/2011	U.S. EPA. 2011. Nanotechnology basic information. Available online at: <a href="http://epa.gov/ncer/nano/questions/">http://epa.gov/ncer/nano/questions/</a> .	3	No	No	08092
11.6	EPA-HQ-OW-2014-0170-0191	Nanomaterials EPA is assessing - DCN 08093	Overview of the types of nanomaterials identified by EPA for investigation into potential human health and environmental impacts and their common uses.	Publication; USEPA	U.S. EPA	02/12/2013	U.S. EPA. 2013. Nanomaterials EPA is assessing. (February 12). Available online at: <a href="http://www.epa.gov/nanoscience/quickfinder/nanomaterials.htm#canan">http://www.epa.gov/nanoscience/quickfinder/nanomaterials.htm#canan</a> .	1	No	No	08093
11.6	EPA-HQ-OW-2014-0170-0192	Nanoscale Materials Stewardship Program - DCN 08094	Discussion of EPA's voluntary Nanoscale Materials Stewardship Program.	Publication; USEPA	U.S. EPA	01/01/2013	U.S. EPA. 2013. Nanoscale Materials Stewardship Program. Available online at: <a href="http://epa.gov/oppt/nano/stewardship.htm">http://epa.gov/oppt/nano/stewardship.htm</a> .	2	No	No	08094

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11.6	EPA-HQ-OW-2014-0170-0193	Fate and effects of silver nanoparticles in terrestrial environments - DCN 08095	Terrestrial environments are likely to be the ultimate sink for the majority of manufactured silver nanoparticles. As they are used, silver nanoparticles enter wastewater streams and ultimately partition into sewage sludge, the majority of which is used a	Publication; Copyrighted Materials	J.M. Unrine	11/15/2012	Unrine, J. M. et al. 2012. Fate and effects of silver nanoparticles in terrestrial environments. Proceedings from the SETAC 33rd Annual Meeting, Long Beach, California.	5	No	Yes	08095
11.6	EPA-HQ-OW-2014-0170-0194	Occurrence and removal of titanium at full scale wastewater treatment plants: implications for TiO2 nanomaterials - DCN 08096	Titanium dioxide nanoparticles increasingly will be used in commercial products and have a high likelihood of entering municipal sewage that flows to centralized wastewater treatment plants (WWTPs). Treated water (effluent) from WWTPs flows into rivers an	Publication; Copyrighted Materials	Paul Westerhoff, Guixue Song, Kiril Hristo	03/22/2011	Westerhoff, P. et al. 2011. Occurrence and removal of Ti at full scale wastewater treatment plants: implications for TiO2 nanomaterials. Journal of Environmental Monitoring. 13(5): 1195-1203.	10	No	Yes	08096
11.6	EPA-HQ-OW-2014-0170-0195	Nanomaterial removal and transformation during biological wastewater treatment - DCN 08097	Engineered nanomaterials already occur in sewage and wastewater biosolids due to their release from commercial products. Increasing levels and diversity of nanomaterials may enter sewage and wastewater treatment plants in the future as they are released f	Publication; Copyrighted Materials	Paul Westerhoff, Mehlika Kiser, Kiril Hri	11/13/2012	Westerhoff, P. K. et al. 2013. Nanomaterial removal and transformation during biological wastewater treatment. Environmental Engineering Science. 30(3): 109-117.	9	No	Yes	08097

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11.6	EPA-HQ-OW-2014-0170-0196	Telephone Communication between Mark Wiesner, Duke University, and Eva Knoth and Kim Wagoner, Eastern Research Group, Inc. Re: Request for Information on Nanomaterials Research - DCN 08098	Telephone communication between Mark Wiesner, Duke University, and Eva Knoth and Kim Wagoner, Eastern Research Group, Inc. about information on nanomaterials research.	Meeting Materials	Mark Wiesner	03/13/2013	Wiesner, M. 2013. Telephone Communication between M. Wiesner, Duke University, and E. Knoth and K. Wagoner, ERG. Re: Request for Information on Nanomaterials Research.(March 13).	2	No	No	08098
11.6	EPA-HQ-OW-2014-0170-0197	Meditations on the ubiquity and mutability of nano-sized materials in the environment - DCN 08099	A wide variety of nanomaterials can be found naturally occurring in the environment, although finding and characterizing these materials remains a challenge due to their size. Recent studies in the field have shown that natural nanomaterials are common in	Publication; Copyrighted Materials	Mark R. Wiesner, Gregory V. Lowry, Elizabe	11/22/2011	Wiesner, M. R. et al. 2011. Meditations on the ubiquity and mutability of nano-sized materials in the environment. ACS Nano. 5(11): 8466-8470.	5	No	Yes	08099
11.6	EPA-HQ-OW-2014-0170-0198	Decreasing uncertainties in assessing environmental exposure, risk, and ecological implications of nanomaterials - DCN 08100	Determining the fate and interactions of nanomaterials in complex environmental contexts is required to assess exposure and possible harm as well as to inform regulation.	Publication; Copyrighted Materials	Mark R. Wiesner, Gregory V. Lowry, Kimberl	07/29/2009	Wiesner, M. R. et al. 2009. Decreasing uncertainties in assessing environmental exposure, risk, and ecological implications of nanomaterials. Environmental Science & Technology. 43(17): 6458-6462.	5	No	Yes	08100

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11.6	EPA-HQ-OW-2014-0170-0199	Mechanism of silver nanoparticle toxicity is dependent on dissolved silver and surface coating in <i>Caenorhabditis elegans</i> - DCN 08101	The rapidly increasing use of silver nanoparticles (Ag NPs) in consumer products and medical applications has raised ecological and human health concerns. A key question for addressing these concerns is whether Ag NP toxicity is mechanistically unique to	Publication; Copyrighted Materials	Xinyu Yang, Andreas P. Gondikas, Stella M.	12/07/2011	Yang, X. et al. 2012. Mechanism of silver nanoparticle toxicity is dependent on dissolved silver and surface coating in <i>Caenorhabditis elegans</i> . <i>Environmental Science &amp; Technology</i> . 46(2): 1119-1127.	2	No	Yes	08101
11.6	EPA-HQ-OW-2014-0170-0200	Stability of commercial metal oxide nanoparticles in water - DCN 08102	The fate of commercial nanoparticles in water is of significant interest to health and regulatory authorities. This research investigated the dispersion and stability of metal oxide nanoparticles in water as well as their removal by potable water treatment	Publication; Copyrighted Materials	Yang Zhang, Yongsheng Chen, Paul Westerhof	12/05/2007	Zhang, Y. et al. 2008. Stability of commercial metal oxide nanoparticles in water. <i>Water Research</i> . 42(8-9): 2204-2212.	9	No	Yes	08102
11.6	EPA-HQ-OW-2014-0170-0201	Email Communication between Suzanne Davis, California EPA, Department of Toxic Substances Control, and Eva Knoth, Eastern Research Group, Inc. Re: Request for Information on Nanomaterials Research - DCN 08103	Email communication between Suzanne Davis, California EPA, Department of Toxic Substances Control, and Eva Knoth, Eastern Research Group, Inc. about information on nanomaterials research.	Meeting Materials	Suzanne Davis	08/23/2013	Davis, Suzanne. 2013. Email Communication between Suzanne Davis, California EPA, Department of Toxic Substances Control, and Eva Knoth, Eastern Research Group, Inc. Re: Request for Information on Nanomaterials Research. (August 23).	3	No	No	08103

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11.6	EPA-HQ-OW-2014-0170-0202	Email Communication between Paul Westerhoff, Arizona State University, and Eva Knoth, Eastern Research Group, Inc. Re: Request for Information on Nanomaterials Research - DCN 08104	Email communication between Paul Westerhoff, Arizona State University, and Eva Knoth, Eastern Research Group, Inc. about information on nanomaterials research.	Meeting Materials	Paul Westerhoff	03/18/2013	Westerhoff, Paul. 2013. Email Communication between Paul Westerhoff, Arizona State University, and Eva Knoth, Eastern Research Group, Inc. Re: Request for Information on Nanomaterials Research. (March 18).	3	No	No	08104
11.6	EPA-HQ-OW-2014-0170-0216	Nanotechnology: Applications for Environmental Remediation - DCN 08115	Overview and discussion of applications of nanotechnology for remediation of environmental contamination.	Publication; USEPA	U.S. EPA	11/14/2012	U.S. EPA. 2012. Nanotechnology: Applications for Environmental Remediation. Available online at: <a href="http://clu-in.org/techfocus/default.focus/sec/Nanotechnology:_Applications_for_Environmental_Remediation/catalog/Application">http://clu-in.org/techfocus/default.focus/sec/Nanotechnology:_Applications_for_Environmental_Remediation/catalog/Application</a> . Accessed 2/26/2015.	13	No	No	08115
11.7	EPA-HQ-OW-2014-0170-0099	History of Glen-Gery Brick - DCN 07988	Discussion from the company's website on the history of Glen-Gery Brick Corp.	Fact/Data Sheet	Glen-Gery Brick	01/01/2014	Glen-Gery Brick. 2014. History of Glen-Gery Brick. Available online at: <a href="http://www.glengery.com/about-us/history">http://www.glengery.com/about-us/history</a> . Accessed: June 20, 2014.	2	No	No	07988

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11.7	EPA-HQ-OW-2014-0170-0100	Interstate Brick History - DCN 07989	Discussion from the company's website on the history of Interstate Brick.	Fact/Data Sheet	Interstate Brick	01/01/2014	Interstate Brick. 2014. Interstate Brick History. Available Online at: <a href="http://www.interstatebrick.com/history.htm">http://www.interstatebrick.com/history.htm</a> . Accessed: June 20, 2014.	1	No	No	07989
11.7	EPA-HQ-OW-2014-0170-0101	Telephone Communication Between Susan Miller, Brick Industry Association, and Amie Aguiar, Eastern Research Group, Inc. Re: Brick Manufacturing Process - DCN 07990	Telephone communication between Susan Miller, Brick Industry Association, and Amie Aguiar, ERG about the brick manufacturing process.	Meeting Material	Susan Miller	04/17/2014	Miller, Susan. 2014. Telephone Communication Between Susan Miller, Brick Industry Association, and Amie Aguiar, Eastern Research Group, Inc. Re: Brick Manufacturing Process. (April 17).	6	No	No	07990
11.7	EPA-HQ-OW-2014-0170-0102	RIN data for National Emission Standards for Hazardous Air Pollutants (NESHAP): Brick and Structural Clay Products Manufacturing and Clay Ceramics Manufacturing - DCN 07991	Regulatory status for the brick and structural clay products manufacturing NESHAP and clay ceramics manufacturing NESHAP.	Data	OMB	05/01/2014	OMB. 2014. Office of Management and Budget. RIN data for National Emission Standards for Hazardous Air Pollutants (NESHAP): Brick and Structural Clay	1	No	No	07991

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11.7	EPA-HQ-OW-2014-0170-0103	Sierra Club vs. EPA. U.S. Court of Appeals for the District of Columbia Circuit. No. 03-1202 - DCN 07992	2007 court decision between the Sierra Club and EPA about the Agency's air pollution standards for brick and ceramics kilns. The court interpreted that most of the standards violate the Clean Air Act, therefore, the standards were vacated in their entirety	Decision	U.S. Court of Appeals	03/13/2007	Sierra Club vs. EPA. 2007. U.S. Court of Appeals for the District of Columbia Circuit. No. 03-1202. March 13, 2007.	20	No	No	07992
11.7	EPA-HQ-OW-2014-0170-0104	Email Communication Between Jeff Telander, U.S. EPA Office of Air and Radiation, and William Swietlik, U.S. EPA Office Water. Re: Brick and Clay follow-up - DCN 07993	Email communication between Jeff Telander, U.S. EPA Office of Air and Radiation and William Swietlik, U.S. EPA OW about the brick and clay industry.	Meeting Materials	Jeff Telander	05/21/2014	Telander, Jeff. 2014. Email Communication Between Jeff Telander, U.S. EPA Office of Air and Radiation, and William Swietlik, U.S. EPA Office of Water.	4	No	No	07993
11.7	EPA-HQ-OW-2014-0170-0105	U.S. Economic Census: 2011 County Business Patterns - DCN 07994	U.S. Census Data.	Data	U.S. Census	05/16/2013	U.S. Census. 2011. U.S. Economic Census: 2011 County Business Patterns.	2	No	No	07994

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11.7	EPA-HQ-OW-2014-0170-0106	Fact Sheet for National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing: Reconsideration - DCN 07995	Fact sheet for the brick and structural clay products manufacturing NESHAP.	Fact/Data Sheet	U.S. EPA	04/22/2005	U.S. EPA. 2005. Fact Sheet for NESHAP for Brick and Structural Clay Products Manufacturing: Reconsideration. Washington, D.C. (April 22).	2	No	No	07995
12.2	EPA-HQ-OW-2014-0170-0111	2012 NAICS Index File - DCN 08001	2012 NAICS codes and descriptions.	Data	U.S. Census Bureau	01/01/2012	U.S. Census Bureau. 2012. 2012 NAICS Index File. Available online at: <a href="http://www.census.gov/cgi-bin/sssd/naics/naicsrch?chart=2012">http://www.census.gov/cgi-bin/sssd/naics/naicsrch?chart=2012</a> .	0	No	No	08001
12.2	EPA-HQ-OW-2014-0170-0204	DMR Pollutant Loading Tool. DMR Pollutant Parameters Used and Not Used by the Loading Tool - DCN 08002	NPDES Discharge Monitoring Report (DMR) Parameters used in the DMR Pollutant Loading Tool.	Data	U.S. EPA	01/01/2014	U.S. EPA. 2014. DMR Pollutant Loading Tool. DMR Pollutant Parameters Used and Not Used by the Loading Tool. Accessed: June 24, 2014.	0	No	No	08002

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12.2	EPA-HQ-OW-2014-0170-0207	Export of Industrial Wastewater Treatment Technology (IWTT) Database Tables - DCN 08000	Export of the data captured in the Industrial Wastewater Treatment Technology Database.	Data	Eastern Research Group	09/30/2014	ERG. 2014. Eastern Research Group, Inc. Export of Industrial Wastewater Treatment Technology (IWTT) Database Tables. Chantilly, VA. (September).	0	No	No	08000
7.12	EPA-HQ-OW-2014-0170-0206	Analysis of API and AFPM Comments on Dioxin Discharges from Refineries Relating to CWA Effluent Guideline Screening - DCN 08118	Memorandum from Abt Associates to Stephen DeVito, USEPA. Re: Analysis of API and AFPM Comments on Dioxin Discharges from Refineries Relating to CWA Effluent Guideline Screening.	Memorandum	Abt Associates	04/07/2015	Abt Associates. 2015. Memorandum from Abt Associates to Stephen DeVito, USEPA. Re: Analysis of API and AFPM Comments on Dioxin Discharges from Refineries Relating to CWA Effluent Guideline Screening. (April).	10	No	No	08118