



United States  
Environmental Protection  
Agency

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# User Guide to the Docket for the Final 2016 Effluent Guidelines Program Plan



EPA Docket Number EPA-HQ-OW-2015-0665 ([www.regulations.gov](http://www.regulations.gov))

April 2018  
DCN 08544

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## 1.0 OVERVIEW

Under the Clean Water Act (CWA), EPA establishes technology-based national regulations, termed “effluent limitations guidelines and standards,” to reduce pollutant discharges from categories of industrial facilities to waters of the United States. Under the CWA, EPA similarly establishes technology-based regulations, termed “pretreatment standards” to reduce indirect pollutant discharges from industrial facilities to waters of the United States.

The CWA also specifies effluent guideline planning and review requirements. There are different requirements for direct and indirect dischargers, but both specify annual review of promulgated effluent guidelines and pretreatment standards. For direct dischargers, the CWA requires EPA to publish an Effluent Guidelines Program Plan every two years after allowing for public review and comment on the plan prior to final publication.

This document provides information on the docket supporting the Final 2016 Effluent Guidelines Program Plan (Final 2016 Plan). See the Federal Register Notice presenting EPA’s Final 2016 Plan, 83 Federal Register 19281 (02 May 2018). Documents cited in the Final 2016 Plan are listed in Attachment 3, with their Regulations.gov Document ID Numbers noted. Key supporting documents are also available on [EPA’s Effluent Guidelines Program Planning webpage](#).

## 2.0 BACKGROUND INFORMATION ON THE DOCKET

### What is the Docket and How Can I Gain Access to It?

Docket ID No. EPA-HQ-OW-2015-0665 is the official docket for EPA’s Final 2016 Plan for existing effluent limitations guidelines. The official docket consists of the documents specifically referenced in the Federal Register notices of these actions, any public comments received, and other related information. Although it is a part of the official docket, Confidential Business Information (CBI) or other information whose disclosure is restricted by statute is not included in the materials available to the public.

The official public docket is the collection of electronic and hard copy materials that is available for public viewing at the Water Docket in the EPA Docket Center, (EPA/DC), located in the EPA Headquarters Library, WJC West Building, Room Number 3334, 1301 Constitution Ave., NW, Washington, DC. An electronic version of the public docket is available through a federal-wide electronic docket management system located at [www.regulations.gov](http://www.regulations.gov).

You may use the Regulations.gov web site to view public comments, access a listing of the contents of the official docket, and access those documents in the public docket that are available electronically. Certain documents are not available in the electronic docket system. These documents include, but are not limited to copyright-protected material; physical objects such as maps, aerial photographs, colored charts; and information that has been claimed as confidential. Although not all docket materials may be available electronically, you may still access any of the publicly-available docket materials at the EPA Docket Center.

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Can I retrieve information that has been claimed “Confidential Business Information?”

The docket may contain some documents that contain confidential business information (CBI). CBI documents are not available for review by the public, and are not filed in the Water Docket in the EPA Docket Center. Some documents are classified as CBI because companies providing the information specifically claimed certain information (e.g., operating or financial data) as CBI. Other documents are classified as CBI because release of these documents could indirectly reveal information claimed to be confidential.

How is the Docket for EPA’s Final 2016 Plan related to the Docket for the Preliminary 2016 Effluent Guidelines Program Plan?

The CWA requires EPA to publish an Effluent Guidelines Program Plan every two years after allowing for public review and comment on the plan prior to final publication. Documents supporting the Preliminary 2016 Effluent Guidelines Program Plan, including the 2015 annual review of existing effluent limitations guidelines are also located in Docket ID No. EPA-HQ-OW-2015-0665. All of the documents in the docket supporting the 2015 Annual Review and Preliminary 2016 Effluent Guidelines Program Plan also support the 2016 Annual Review and Final 2016 Plan. EPA has also incorporated by reference all of the documents in the dockets supporting the Plans for 2004, 2006, 2008, 2010, 2012, and 2014 which include the annual reviews for years 2003-2014. See EPA-HQ-OW-2006-0771-0822 (DCN 05106), EPA-HQ-OW-2008-0517-0475 (DCN 06937), EPA-HQ-OW-2010-0824-0121 (DCN 07722), EPA-HQ-OW-2014-0170-0078 (DCN 07987), and EPA-HQ-OW-2015-0665-0302 (DCN 08311).

### **3.0 ACCESSING INFORMATION IN THE DOCKET**

How Do I Find Documents in the Docket?

*Water Docket in the EPA Docket Center*

The official public docket is the collection of electronic and hard copy materials that is available for public viewing at the Water Docket in the EPA Docket Center, (EPA/DC), located in the EPA Headquarters Library, WJC West Building, Room Number 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Water Docket is (202) 566–2426. You can also contact the Water Docket via e-mail: OW-Docket@epa.gov.

*Regulations.gov*

You will find instructions for using Regulations.gov on its Internet home page. Regulations.gov provides limited electronic search capabilities. If you know the Document ID Number (e.g., EPA-HQ-OW-2015-0665-1025) of the document you wish to view, you can type that number directly into the field beneath the “SEARCH” heading.

If you do not know the specific Document ID Number, you can input the docket identification number (EPA-HQ-OW-2015-0665) in the field beneath the “SERACH” heading

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and click Search. You will now see a listing of the contents of the official docket in the public record. The listing includes the Document Title (e.g., “Final 2016 Effluent Guidelines Program Plan”), Document ID Number (e.g., EPA-HQ-OW-2015-0665-1025), Date Posted (e.g., “May 2, 2018”), Document Type (e.g., “Notice”), and other information.

You have several options to narrow your search within the docket listing by using the filters under the “Select Document Type” field. For example, you can specify the Document Type (e.g., Public Submissions, Notices, or Rules) as well as status (e.g. Open for Comment/Submission).

#### How are Documents Organized in the EPA-HQ-OW-2015-0665 Docket?

Each document in the docket has two document identification numbers. One is the Regulations.gov Document ID Number (e.g., EPA-HQ-OW-2015-0665-1025) that was assigned when EPA added the document to the official docket. The last four digits are the unique consecutive regulations.gov document ID. The second is the document control number (DCN) that was assigned during the development of the document (e.g., DCN 08317). In documents prepared for the docket, EPA typically identifies references by their DCN. The DCN appears at the end of the document titles in the **Document Title** field listed in Regulations.gov (e.g., “Final 2016 Effluent Guidelines Program Plan - DCN 08317”).

#### What is the Docket EPA-HQ-OW-2015-0665 Subject Outline?

EPA has prepared a *subject outline* of the documents included in EPA-HQ-OW-2015-0665 to help you locate documents that address related topics or subjects. The subject outline for EPA-HQ-OW-2015-0665 is provided in Attachment 1. With the exception of public submissions, each document in the docket has been assigned to an outline section.

#### What is the Docket EPA-HQ-OW-2015-0665 Subject Index?

The docket EPA-HQ-OW-2015-0665 *subject index* is a list of documents in the docket, sorted by subject outline section, available as Attachment 2 to this document. Because of its size, Attachment 2 is available separately, at DCN 08544A1. The subject index summarizes certain information for each document, including the subject outline section, Regulations.gov Document ID Number, DCN, document title, author, and abstract. EPA assigned each document to a subject outline section during the development of the document.

The subject index for the docket includes the following fields:

Field Name	Description
Record Section	Section number from docket subject outline.
Regulations.gov Document ID Number	Unique document number assigned when EPA added the document to the official docket. The Document ID Number includes the Docket Number (e.g., EPA-HQ-OW-2015-0665) followed by a consecutive document number to distinguish the individual documents within the docket.
Title	Title of document.
Abstract	Additional description of document.
Document Type	Type of supporting and related materials (e.g., publication, meeting materials, data, etc.).
Author	Author of document (Last name, first full name).
Author Date	Date of publication, issue, edition, or version. Actual date of meeting or telephone call.
Source Citation	For copyright protected documents, this is a bibliographic citation (without title or author) that you can use to find the document in a library. For materials retrieved from the Internet, Source Citation lists the URL.
Category Industry	Industry category that the document is supporting.
Page	Number of pages in document.
CBI	Confidential Business Information (Yes/No). CBI is not available to the public.
Copyrighted	(Materials that are copyright protected (e.g., books and other published material) (Yes/No). Copyrighted documents are not available through Regulations.gov; they are only available in hard copy at the EPA Docket Center.
DCN	Unique document control number (DCN) assigned during the development of the document.

#### How Do I Use the Subject Index to Find Documents in the Docket?

Review the subject outline (see Attachment 1) to determine which section may contain the documents of interest. Then, locate documents for that section in the index and note their Regulations.gov Document ID Number. Documents available electronically can be accessed through Regulations.gov. Other documents can be reviewed at the Water Docket in the EPA Docket Center in Washington, DC. See information on the Water Docket above. You may also be able to locate copyright protected materials (for example, articles from technical publications) at an academic or public library.

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#### **4.0 FURTHER INFORMATION**

The primary contact regarding questions or comments on Docket ID No. EPA-HQ-OW-2015-0665 and the Final 2016 Effluent Guidelines Program Plan is:

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**Attachment 1**

**SUBJECT OUTLINE FOR THE PRELIMINARY 2016 EFFLUENT GUIDELINES  
PROGRAM PLAN  
DOCKET  
EPA-HQ-OW-2015-0665**

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## Final 2016 Effluent Guidelines Program Plan Docket Subject Outline

### Docket EPA-HQ-OW-2015-0665

The following existing sections include the docket materials for the 2004 Effluent Guidelines Program Plan.

- 1 Docket OW-2003-0074: Background Documents (*includes TSD and appendices*)**
- 2 Docket OW-2003-0074: Screening Level Review (supporting 2004 Plan)**
- 3 Docket OW-2003-0074: Industry Rankings**

The following sections will be used to organize the docket and project file materials for the 2006, 2008, 2010, 2012, 2014, and 2016 Effluent Guidelines Program Plans.

#### **4 Public Comments**

**Docket EPA-HQ-OW-2004-0032**  
**Docket EPA-HQ-OW-2003-0074**  
**Docket EPA-HQ-OW-2006-0771**  
**Docket EPA-HQ-OW-2008-0517**  
**Docket EPA-HQ-OW-2010-0824**  
**Docket EPA-HQ-OW-2014-0170**  
**Docket EPA-HQ-OW-2015-0665**

#### **5 No entries**

#### **6 Federal Register Notices, Outreach Materials, and Other Background Documents**

- 6.1 Previous Dockets, by reference
- 6.2 Federal Register Notices
- 6.3 Outreach Efforts
- 6.4 Technical Support Documents and Appendices

#### **7 Public and Inter-Agency Comments**

- 7.1 Public Comments on the 2004 Effluent Guidelines Program Plan
- 7.2 Public Comments on the Preliminary 2006 Effluent Guidelines Program Plan
- 7.3 Public Comments on the Final 2006 Effluent Guidelines Program Plan
- 7.4 Public Comments on the Preliminary 2008 Effluent Guidelines Program Plan
- 7.5 Public Comments on the First CBM ICR (January 2008)
- 7.6 Public Comments on the first HCI ICR (August 2008)
- 7.7 Public Comments on the Final 2008 Effluent Guidelines Program Plan
- 7.8 Public Comments on the Preliminary 2010 Effluent Guidelines Program Plan
- 7.9 Public Comments on the Final 2010 Effluent Guidelines Program Plan
- 7.10 Public Comments on the Preliminary 2012 Effluent Guidelines Program Plan



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- 7.11 Public Comments on the Final 2012 Effluent Guidelines Program Plan
  - 7.12 Public Comments on the Preliminary 2014 Effluent Guidelines Program Plan
  - 7.13 Public Comments on the Preliminary 2016 Effluent Guidelines Program Plan

## **8 CWA §304(g) Review**

Review of the pretreatment standards for industrial point source categories composed entirely or almost entirely of indirect dischargers.

- 8.1 Food Service Establishments
- 8.2 Industrial Laundries
- 8.3 Photo-processing
- 8.4 Printing and Publishing
- 8.5 Health Services Industries
  - 8.5.1 Independent and Stand-alone Medical and Dental Laboratories
  - 8.5.2 Offices and Clinics of Doctors of Medicine
  - 8.5.3 Offices and Clinics of Dentists
  - 8.5.4 Nursing and Personal Care Facilities
  - 8.5.5 Veterinary Care Services
  - 8.5.6 Hospitals and Clinics
  - 8.5.7 Health Services Industries Economic Information
- 8.6 Independent and Stand-alone Laboratories
- 8.7 Industrial Container and Drum Cleaning (ICDC)
- 8.8 Tobacco Products Processing
- 8.9 Correctional Institutions (Prisons)

## **9 Screening-Level Reviews**

Screening-level review of existing guidelines and standards and new categories.

- 9.1 Analyses of the Toxics Release Inventory  
Plan, database, QC checks (including telecons)
- 9.2 Analyses of Permit Compliance System data Plan, ICIS-NPDES Data Plan, database, QC  
checks (including telecons)
- 9.3 Other Screening-Level Data Sources NAICS/SIC/Point Source Category Crosswalks
- 9.4 Screening-Level Review Reports  
QA Project Plans for TRI and PCS Analysis,  
2005 Screening-Level Analysis Report  
Nutrients Memo
- 9.5 Toxic Weighting Factor Development

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## 10 Existing Guidelines and Standards Review

Further review based on National Strategy Factors, of industries with existing guidelines and standards, prioritized during screening-level review. The National Strategy Factors are: 1) human health and environment hazards; 2) technology innovation and process changes; 3) economics; 4) implementation and efficiency considerations.

### 10.1 Review Reports Review of Prioritized Categories of Industrial Dischargers

All existing categories are listed below. Potential new subcategories are included with their parent category. If no materials specific to a category are collected, the section will be identified as “no entries.” Materials collected in support of detailed studies are organized in additional sections, following Section 11.

- 10.2 Aluminum Forming, Part 467
- 10.3 Aquatic Animal Production Industry, Part 451
- 10.4 Asbestos Manufacturing, Part 427
- 10.5 Battery Manufacturing, Part 461
- 10.6 Centralized Waste Treaters, Part 437
- 10.7 Canned and Preserved Seafood, Part 408
- 10.8 Carbon Black Manufacturing, Part 458
- 10.9 Cement Manufacturing, Part 411
- 10.10 Coal Mining, Part 434
- 10.11 Coil Coating, Part 465
- 10.12 Concentrated Animal Feeding Operations, Part 412
- 10.13 Copper Forming, Part 468
- 10.14 Dairy Products Processing, Part 405
- 10.15 Electrical and Electronic Components, Part 469
- 10.16 Electroplating, Part 413
- 10.17 Explosives, Part 457
- 10.18 Ferroalloy Manufacturing, Part 424
- 10.19 Fertilizer Manufacturing, Part 418
- 10.20 Fruits and Vegetable Processing, Part 407
- 10.21 Glass Manufacturing, Part 426
- 10.22 Grain Mills Manufacturing, Part 406
- 10.23 Gum and Wood Chemicals, Part 454
- 10.24 Hospitals, Part 460
- 10.25 Ink Formulating, Part 447
- 10.26 Inorganic Chemicals, Part 415
- 10.27 Iron and Steel Manufacturing, Part 420
- 10.28 Landfills, Part 445
- 10.29 Leather Tanning and Finishing, Part 425
- 10.30 Meat and Poultry Products, Part 432
- 10.31 Metal Finishing, Part 433
- 10.32 Metal Molding and Casting (Foundries), Part 464
- 10.33 Metal Products and Machinery, Part 438
- 10.34 Mineral Mining and Processing, Part 436
- 10.35 Nonferrous Metals Forming and Metal Powders, Part 471

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- 10.36 Nonferrous Metals Manufacturing, Part 421
  - 10.37 Oil & Gas Extraction, Part 435
    - 10.37.1 Coalbed Methane
    - 10.37.2 Shale Gas Extraction
  - 10.38 Ore Mining and Dressing, Part 440
  - 10.39 Organic Chemicals, Plastics and Synthetic Fibers, Part 414 (including Thompson Report response materials)
    - 10.39.1 Chemical Formulating, Packaging and Repackaging
    - 10.39.2 Biodiesel, Ethanol, and Other Biofuels
  - 10.40 Paint Formulating, Part 446
  - 10.41 Paving and Roofing Materials (Tars and Asphalt), Part 443
  - 10.42 Pesticide Chemicals Manufacturing, Formulation and Repackaging, Part 455
  - 10.43 Petroleum Refining, Part 419
    - 10.43.1 Petroleum Bulk Stations and Terminals (PBST)
  - 10.44 Pharmaceutical Manufacturing, Part 439
  - 10.45 Phosphate Manufacturing, Part 422
  - 10.46 Photographic, Part 459
  - 10.47 Plastic Molding and Forming, Part 463
  - 10.48 Porcelain Enameling, Part 466
  - 10.49 Pulp, Paper, and Paperboard, Part 430 (materials not related to detailed study, e.g., Phase III permit writers support materials)
  - 10.50 Rubber Manufacturing, Part 428
  - 10.51 Soaps and Detergents Manufacturing, Part 417
  - 10.52 Steam Electric Power Generation, Part 423
  - 10.53 Sugar Processing, Part 409
  - 10.54 Textile Mills, Part 410
  - 10.55 Timber Products Processing, Part 429
  - 10.56 Transportation Equipment Cleaning, Part 442
  - 10.57 Waste Combustors (Commercial Incinerators Combusting Hazardous Waste), Part 444

## **11 Review of Categories Without Existing Guidelines**

- 11.1 Airport Deicing Operations (now Part 449)
- 11.2 Water Supply (Drinking Water Treatment)
- 11.3 Miscellaneous Foods and Beverages
  - 11.4.1 Distilled and Blended Liquor
  - 11.4.2 Malt Beverages
  - 11.4.3 Soybean Oil Mills
  - 11.4.4 Miscellaneous Foods and Beverages Economic Information
- 11.4 Liquefied Natural Gas Import Terminals
- 11.5 Biofuel Manufacturing
- 11.6 Engineered Nanomaterials Manufacturing and Production Use
- 11.7 Brick and Structural Clay Products Manufacturing

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**12 Water Pollution Control Technologies, Water Reuse, Water Conservation**

Include information about pollution prevention, wastewater treatment, and other wastewater pollution control technologies that applies to multiple point source categories. Technologies or case studies that focus on one category should be included in the section for the category or detailed study.

- 12.1 Water Conservation Issues
- 12.2 Wastewater Treatment Technologies Investigation

**13 Steam Electric Power Generation Detailed Study (closed as of December 2009)**

- 13.1 Study Plans
  - Detailed Study Plan, QA Project Plan
- 13.2 Industry Profile
- 13.3 NPDES Permits
- 13.4 Stakeholder Meeting Material
- 13.5 Pollution Control Technologies and Their Costs
- 13.6 Industry Surveys
- 13.7 Detailed Study Reports
- 13.8 Site Visits
- 13.9 Sampling
- 13.10 EPA Data Request Development Files
- 13.11 Technology Options, Costs, and Loads
- 13.12 Environmental Assessment Documentation

**14 Tobacco Products Processing Detailed Study (closed as of December 2006)**

- 14.1 Study Plans (Detailed Study Plan, QA Project Plan)
- 14.2 Industry Profile (include information on companies and individual plants)
- 14.3 Site Visits, Sampling and Analysis (include pre-sampling telephone contact reports)
- 14.4 Pollution Control Technologies and Their Costs
- 14.5 Detailed Study Reports
- 14.6 Tobacco Products Economic Information

**15 Pulp, Paper, and Paperboard Detailed Study (closed as of December 2006)**

- 15.1 Study Plans (Detailed Study Plan)
- 15.2 Industry Information
  - Meeting summary, AF&PA disputed loads letter with enclosures, AF&PA minimum monitoring letter with enclosures, Mill discharge data (i.e., minor discharger, Washington mills), Phase I Mill Industry Profile.
  - Draft TRI Guidance Document, TAPPI paper Comparing Chlorinated Phenolic loadings
  - 15.2.1 Pulp and Paper Industry Economic Information
- 15.3 Quality Review
  - Designation of SIC codes into Phase, Changes to Phases, telecons (i.e., Kimberly- Clark Everett WA, Weyerhaeuser surface impoundment, IP-Cantonment Permit Status)
- 15.4 NPDES Permits (Includes factsheets and communication from mills that defined outfalls)
  - 15.4.1 Phase I mill permits

- 15.4.2 Phase II mill permits
- 15.5 Detailed Study Reports

## **16 Coal Mining Detailed Study (closed as of 2006)**

- 16.1 Study Plans (Detailed Study Plan, QAPP)
- 16.2 Industry profile for the coal mining industry
- 16.3 Pollutant loads
  - Data Obtained from states and IMCC
  - Pollutant Loads Concept Memo
  - Loads spreadsheets and results
- 16.4 Treatment technologies and costs
  - Model mine memo, AMD Treat review, costing spreadsheets and results
- 16.5 Environmental assessment
  - Memos addressing “Key questions”
  - Articles collected related to impacts of manganese
- 16.6 Flight 93 Memorial Site Information
  - Joanne Hanley e-mails, Lenny Lichvar document, PBS Coals letters
- 16.7 Non-CWA Regulations (SMCRA, Other Federal, and State Laws)
- 16.8 Economics, Bonds, and Trust Funds

## **17 Health Care Detailed Study (closed as of 2011)**

- 17.1 Study Plans and Reports
- 17.2 Dental Hg Industry Profile and Background Information (including wastewater characteristics, regulations, guidance)
- 17.3 Dental Hg BMPs, Control Technologies, and their Costs
- 17.4 Dental Hg POTW Treatment Efficiencies, pass through, and interferences
- 17.5 Dental Hg Economic Information
- 17.6 Dental Hg Meetings
- 17.7 Unused Pharmaceuticals Industry Profile and Background Information (including wastewater characteristics, regulations, guidance)
- 17.8 Unused Pharmaceuticals Data Request and Responses
- 17.9 Unused Pharmaceuticals BMPs, Control Technologies, and their Costs
- 17.10 Unused Pharmaceuticals POTW Treatment Efficiencies, pass through, and interferences
- 17.11 Unused Pharmaceuticals Economic Information
- 17.12 Unused Pharmaceuticals Meetings and Site Visits

## **18 Coalbed Methane Detailed Study (closed as of 2014)**

- 18.1 Plans
- 18.2 Stakeholder Meetings
- 18.3 Site Visits/Sampling
- 18.4 Industry Survey Development and Distribution
  - 18.4.1 Questionnaire Development
  - 18.4.2 Survey Sampling Strategy includes development of mailing list
  - 18.4.3 Information Collection Request includes burden estimate, drafts of ICRs
- 18.5 Industry Survey Results

- 18.5.1 Responses raw completed questionnaires
- 18.5.2 Database(s)
- 18.6 Technical Background Information
  - 18.6.1 Produced water quality and volume data
  - 18.6.2 Reuse and Treatment Technologies technology performance and costs
- 18.7 Economic Background Information
- 18.8 Environmental Assessment Background Information
- 18.9 Detailed Study Reports

**19 EPA's Even Year Analyses**

- 19.1 Review of Industrial Pollutants in Sewage Sludge
- 19.2 Review of EPA Chemical Action Plans
- 19.3 Review of Air Regulations
- 19.4 Review of TRI Industry Sectors Expansion
- 19.5 Review of Analytical Methods

**Attachment 2**

**SUBJECT INDEX LISTING ALL DOCUMENTS SUPPORTING THE FINAL 2016  
EFFLUENT GUIDELINES PROGRAM PLAN**

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# User Guide Index for EPA-HQ-OW-2015-0665 - 2016 Final Plan

RECORD SECTION	EPA DOCUMENT ID	TITLE	ABSTRACT	DOCUMENT TYPE	AUTHOR	AUTHOR DATE	SOURCE CITATION	CATEGORY INDUSTRY	PAGE	CBI	COPY-RIGHTED	DCN
10.15	EPA-HQ-OW-2015-0665-0330	Telephone Communication with Sean Aldrich, Intel Corporation, and Anna Dimling, ERG, Re: Intel Corporation in Chandler, AZ - DCN 08334	Telephone conversation between Sean Aldrich, Intel Corporation, and Anna Dimling, Eastern Research Group, Inc., about Intel Corporation in Chandler, AZ.	Meeting Materials	Aldrich, Sean	04/05/2016	Aldrich, Sean. 2016. Telephone Communication Between Sean Aldrich, Intel Corporation, and Anna Dimling, ERG, Re: Intel Corporation. (April 5).	Electrical and Electronic Components	3	No	No	08334
10.15	EPA-HQ-OW-2015-0665-0331	Novel Process for the Treatment of Wastewaters from the Microelectronics Industry - DCN 08335	Infilco Degremont, Inc. has developed an innovative process to treat wastewaters generated by the microelectronics industry, paper presented at the International Water Conference.	Publication	Ballard, T., et al.	05/01/2013	Ballard, T., et al. 2013. Novel Process for the Treatment of Wastewaters from the Microelectronics Industry. IWC. (May).	Electrical and Electronic Components	8	No	No	08335
10.15	EPA-HQ-OW-2015-0665-0332	Summary of Semiconductor Presentations and Posters at 2016 ASMC SEMI Conference, Saratoga Springs, NY - DCN 08336	Memorandum from Anna Dimling, ERG, to Jezebele Alicea, U.S. EPA, regarding the Summary of Semiconductor Presentations and Posters at 2016 ASMC SEMI Conference, Saratoga Springs, NY.	Memorandum	ERG	06/13/2016	ERG. 2016. Memorandum from Anna Dimling, ERG, to Jezebele Alicea, U.S. EPA. Re: Summary of 2016 ASMC SEMI Conference. Chantilly, VA. (June 13).	Electrical and Electronic Components	6	No	No	08336



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.15	EPA-HQ-OW-2015-0665-0333	Notes from the July 7, 2016 Meeting with the Semiconductor Industry Association (SIA) - DCN 08337	Meeting notes from the July 7, 2016 with the Semiconductor Industry Association, EPA, and ERG.	Meeting Materials	ERG	07/07/2016	ERG. 2016. Notes from Meeting with the Semiconductor Industry Association (SIA). Chantilly, VA. (July).	Electrical and Electronic Components	41	No	No	08337
10.15	EPA-HQ-OW-2015-0665-0334	Process Development and Optimization for High-Aspect Ration Through-Silicon Via (TSV) Etch - DCN 08338	This paper presents the challenges encountered in developing the 6µm x 55µm TSV (6µm diameter x 55µm depth) with a number of continuous process optimizations.	Publication; Copyrighted Materials	Gopalakrishma n, et al	01/01/2016	Gopalakrishman, K., et al. 2016. Process Development and Optimization for High-Aspect Ration Through-Silicon Via (TSV) Etch. ASMC. 460 – 465.	Electrical and Electronic Components	6	No	Yes	08338
10.15	EPA-HQ-OW-2015-0665-0335	Telephone Communication with Jason Heironimus, Freescale Semiconductor, and Anna Dimling, ERG, Re: Freescale Semiconductor – Oak Hill Facility in Austin, TX - DCN 08339	Telephone conversation between Jason Heironimus, Freescale Semiconductor Oak Hill Facility, and Anna Dimling, Eastern Research Group, Inc. , about Freescale Semiconductor – Oak Hill Facility in Austin, TX.	Meeting Materials	Heironimus, J.	04/07/2016	Heironimus, J. 2016. Telephone communication between Jason Heironimus, Freescale, and Anna Dimling, ERG, Re: Freescale Semiconductor. (April 7).	Electrical and Electronic Components	2	No	No	08339

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.15	EPA-HQ-OW-2015-0665-0336	Application of Membrane Technology on Semiconductor Wastewater Reclamation: A Pilot-Scale Study - DCN 08340	Researchers performed a pilot-scale study on a three-stage system has been developed for semiconductor wastewater reclamation.	Publication; Copyrighted Materials	Huang, C. J., et al.	05/28/2011	Huang, et al. 2011. Application of Membrane Technology on Semiconductor Wastewater Reclamation: A Pilot-Scale Study. Desalination. 278: 203-210.	Electrical and Electronic Components	8	No	Yes	08340
10.15	EPA-HQ-OW-2015-0665-0337	IBISWorld Industry Report: Earth Potential: International Competition may Outpace Growth Despite Increased Demand - DCN 08341	IBISWorld Industry Report 33441a Semiconductor & Circuit Manufacturing in the US, Earth Potential: International Competition may Outpace Growth Despite Increased Demand.	Publication; Copyrighted Materials	IBISWorld	04/01/2016	IBISWorld. 2016. Earth Potential: International Competition may Outpace Growth Despite Increased Demand. IBISWorld Industry Report 33441a. (April).	Electrical and Electronic Components	41	No	Yes	08341
10.15	EPA-HQ-OW-2015-0665-0338	IBISWorld Industry Report: Circuit Overload: A Strong Dollar will Encourage Imports and Burden Industry Exports - DCN 08342	IBISWorld Industry Report 33441b: Circuit Board and Electronic Component Manufacturing in the US, Circuit Overload: A Strong Dollar will Encourage Imports and Burden Industry Exports.	Publication; Copyrighted Materials	IBISWorld	06/01/2016	IBISWorld. 2016. Circuit Overload: A Strong Dollar will Encourage Imports and Burden Industry Exports. IBISWorld Industry Report 33441b. (June).	Electrical and Electronic Components	35	No	Yes	08342

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10.15	EPA-HQ-OW-2015-0665-0339	Patent for Biological-Chemical Treatment of Liquid Organic Wastewater - DCN 08343	The invention is directed to systems and methods of biological and chemical treatment of wastewater comprising organic nitrogen compounds. Systems may include: an aerobic reactor, a first separation module for separating liquid and solid components of the wastewater; an oxidation module for removing organic materials from the wastewater; and a post-anoxic reactor for denitrifying at least a portion of the wastewater.	Certification	Infilco Degremont Inc.	08/07/2014	Infilco Degremont Inc. 2014. Patent for Biological-Chemical Treatment of Liquid Organic Wastewater: WO 2014120816 A1. (August).	Electrical and Electronic Components	13	No	No	08343
10.15	EPA-HQ-OW-2015-0665-0340	Telephone Communication with Josh Kang, Samsung, and Anna Dimling, ERG, Re: Samsung Austin Semiconductor in Austin, TX - DCN 08344	Telephone conversation between Josh Kang, Samsung Austin Semiconductor, and Anna Dimling, Eastern Research Group, Inc., about Samsung Austin Semiconductor in Austin, TX.	Meeting Materials	Kang, Josh	03/24/2016	Kang, Josh. 2016. Telephone Communication Between Josh Kang, Samsung, and Anna Dimling, ERG, Re: Samsung Austin Semiconductor. (March 24).	Electrical and Electronic Components	1	No	No	08344
10.15	EPA-HQ-OW-2015-0665-0341	Pretreatment of Electronics Wastewater for Reuse: Removal of Calcium Using Controlled Hydrodynamic Cavitation - DCN 08345	Controlled Hydrodynamic Cavitation (CHC) was investigated to remove high calcium levels from the effluent of the fluoride removal process used at a semiconductor manufacturing company; paper presented at WEFTEC.	Publication; Copyrighted Materials	Kim, S., et al	01/01/2011	Kim, S., et al. 2011. Pretreatment of Electronics Wastewater for Reuse: Removal of Calcium Using Controlled Hydrodynamic Cavitation. WEFTEC.	Electrical and Electronic Components	16	No	Yes	08345

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.15	EPA-HQ-OW-2015-0665-0342	Treatment of Copper Wastewater using Optimal Current Electrochemical-Coagulation - DCN 08346	In this study, an automatic current controlling electrochemical-coagulation (EC) process was developed by testing laboratory scale and pilot-scale reactors for removing copper (Cu) from printed circuit board (PCB) industrial wastewater with an economic use of energy.	Publication; Copyrighted Materials	Kim, K., et al.	05/14/2012	Kim, K., et al. 2012. Treatment of copper wastewater using optimal current electrochemical-coagulation. Environmental Technology. 34: 343-350.	Electrical and Electronic Components	8	No	Yes	08346
10.15	EPA-HQ-OW-2015-0665-0343	Telephone Communication with Gary Marone, Global Foundries, and Anna Dimling, ERG, Re: East Fishkill Facility in Hopewell Junction, NY - DCN 08347	Telephone conversation between Gary Marone, Global Foundries East Fishkill Facility, and Anna Dimling, Eastern Research Group, Inc. , about East Fishkill Facility in Hopewell Junction, NY.	Meeting Materials	Marone, Gary	03/24/2016	Marone, Gary. 2016. Telephone Communication Between Gary Marone, Global Foundries, and Anna Dimling, ERG, Re: East Fishkill Facility. (March 24).	Electrical and Electronic Components	3	No	No	08347
10.15	EPA-HQ-OW-2015-0665-0344	Telephone Communication with John McCoy, Micron Technology, Inc., and Anna Dimling, ERG. Re: Micron Technology Inc. in Manassas, VA - DCN 08348	Telephone conversation between John McCoy, Micron Technology Inc., and Anna Dimling, Eastern Research Group, Inc. , about Micron Technology Inc. in Manassas, VA.	Meeting Materials	McCoy, John	03/24/2016	McCoy, John. 2016. Telephone Communication Between John McCoy, Micron Technology, and Anna Dimling, ERG , Re: Micron Technology. (March 24).	Electrical and Electronic Components	1	No	No	08348

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.15	EPA-HQ-OW-2015-0665-0345	A Combined Biological and Advanced Oxidation Process for the Treatment of Wastewaters from the Microelectronics Industry - DCN 08349	Several bench scale and pilot scale studies were conducted to investigate complete degradation and/or removal of tetra-methyl ammonium hydroxide (TMAH) employing biological and chemical processes; paper presented at WEFTEC.	Publication; Copyrighted Materials	Mehta, S., et al.	01/01/2014	Mehta, S., et al. 2014. A Combined Biological and Advanced Oxidation Process for the Treatment of Wastewaters. WEFTEC.	Electrical and Electronic Components	11	No	Yes	08349
10.15	EPA-HQ-OW-2015-0665-0346	Application of Struvite Precipitation in Treating Ammonium Nitrogen from Semiconductor Wastewater - DCN 08350	Struvite precipitation was applied to the removal of NH <sub>4</sub> -N in semiconductor wastewater. Batch experiments were conducted to examine the effects of final pH, magnesium and orthophosphate dosages and the initial influent concentrations of NH <sub>4</sub> -N and F on the removals of NH <sub>4</sub> -N and PO <sub>4</sub> -P by forming struvite deposits.	Publication; Copyrighted Materials	Ryu, H. D., et al.	01/01/2008	Ryu, H. D., et al. 2008. Application of Struvite Precipitation in Treating Ammonium Nitrogen. Journal of Hazardous Materials. 156: 163-169.	Electrical and Electronic Components	7	No	Yes	08350
10.15	EPA-HQ-OW-2015-0665-0347	Technological Evolution and Radical Innovation - DCN 08351	Technological change is perhaps the most powerful engine of growth in markets today. To harness this source of growth, firms need answers to key questions about the dynamics of technological change: (1) How do new technologies evolve? (2) How do rival technologies compete? and (3) How do firms deal with technological evolution?	Publication; Copyrighted Materials	Sood, A., & Tellis, G.	07/01/2005	Sood, A., & Tellis, G. 2005. Technical Evolution and Radical Innovation. Journal of Marketing. July. 69: 152-168.	Electrical and Electronic Components	18	No	Yes	08351

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10.15	EPA-HQ-OW-2015-0665-0348	Pollution Prevention in the Semiconductor Industry through Recovery and Recycling of Gallium and Arsenic from GaAs Polishing Wastes - DCN 08352	A process was developed for the recovery of both arsenic and gallium from gallium arsenide polishing wastes.	Publication; Copyrighted Materials	Sturgill, J. A., et al.	01/01/2000	Sturgill, J. A., et al. 2000. P2 through Recovery and Recycling of Ga and As from GaAs Polishing Wastes. Clean Products and Processes. 2: 18-27.	Electrical and Electronic Components	10	No	Yes	08352
10.15	EPA-HQ-OW-2015-0665-0349	Use of Reverse Osmosis Membranes to Remove Perfluorooctane Sulfonate (PFOS) from Semiconductor Wastewater - DCN 08353	Guidance intended to provide an overview of the semiconductor manufacturing process, discuss the overlap between Parts 469 and 433, and examine new and emerging manufacturing technologies and how these processes fit into the regulatory framework of Parts 469 and 433.	Publication; Copyrighted Materials	Tang, C. Y., et al.	10/05/2006	Tang, C. Y., et al. 2006. Use of RO Membranes to Remove PFOS from Semiconductor Wastewater. Environmental Science & Technology. 40(23): 7343-7349.	Electrical and Electronic Components	7	No	Yes	08353
10.15	EPA-HQ-OW-2015-0665-0350	United States Census Bureau: 2007 NAICS Definition for 334411 Electron Tube Manufacturing - DCN 08354	U.S. Census Bureau NAICS 334411 Electron Tube Manufacturing definition.	Data	U.S. Census Bureau	08/03/2016	U.S. Census Bureau. 2016. 2007 NAICS Definition for 334411 Electron Tube Manufacturing.	Electrical and Electronic Components	2	No	No	08354

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10.15	EPA-HQ-OW-2015-0665-0351	United States Census Bureau. Economic Census - DCN 08355	Economic Census	Data	U.S. Census Bureau	01/01/2016	U.S. Census Bureau. 2016. United States Census Bureau. Economic Census.	Electrical and Electronic Components	2	No	No	08355
10.15	EPA-HQ-OW-2015-0665-0352	Development Document for Effluent Limitations Guidelines and Standards for the Electrical and Electronic Components Point Source Category – Phase II - DCN 08356	Technical documentation for discharge limitations guidelines and standards for the E&EC industry established by EPA. This document focuses on the Cathode Ray Tube and Luminescent Materials Subcategories.	Publication, U.S. EPA	U.S. EPA	12/01/1983	U.S. EPA. 1983. Development Document for ELGs for the E&EC PSC – Phase II. Washington, D.C. (December). EPA 440/1-84/075.	Electrical and Electronic Components	175	No	No	08356
10.15	EPA-HQ-OW-2015-0665-0353	Permitting Guidance for Semiconductor Manufacturing Facilities - DCN 08357	Guidance intended to provide an overview of the semiconductor manufacturing process, discuss the overlap between Parts 469 and 433, and examine new and emerging manufacturing technologies and how these processes fit into the regulatory framework of Parts 469 and 433.	Publication, U.S. EPA	U.S. EPA	04/21/1998	U.S. EPA. 1998. Permitting Guidance for Semiconductor Manufacturing Facilities. Washington, DC. (April).	Electrical and Electronic Components	15	No	No	08357

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10.15	EPA-HQ-OW-2015-0665-0354	Telephone Communication with Ryan Wasielewski, Powerex, Inc., and Anna Dimling, ERG. Re: Powerex Inc. in Youngwood, PA. - DCN 08358	Telephone conversation between Ryan Wasielewski, Powerex Inc., and Anna Dimling, Eastern Research Group, Inc. , about Powerex Inc. in Youngwood, PA.	Meeting Materials	Wasielewski, Ryan	04/04/2016	Wasielewski, Ryan. 2016. Telephone Communication Between Ryan Wasielewski, Powerex Inc., and Anna Dimling, ERG, Re: Powerex Inc. (April 4).	Electrical and Electronic Components	2	No	No	08358
10.15	EPA-HQ-OW-2015-0665-0355	Summary Notes from EPA's Meeting with the National Association of Clean Water Agencies (NACWA) - DCN 08359	Notes from EPA's Meeting with the National Association of Clean Water Agencies (NACWA) on December 5, 2016	Meeting Materials	U.S. EPA	12/05/2016	U.S. EPA. 2016. Summary Notes from EPA's Meeting with the National Association of Clean Water Agencies (NACWA). (December).	Electrical and Electronic Components	3	No	No	08359
10.27	EPA-HQ-OW-2015-0665-0412	Generating 'Light Work' Removing Heavy Metals - DCN 08420	Copper is increasingly becoming a heavy metal of concern. A new technology was recently developed to treat it without chemicals or pretreatment.	Publication	Aldave, R., & Buday, S.	11/01/2011	Aldave, R., & Buday, S. 2011. Generating 'Light Work' Removing Heavy Metals. Pollution Engineering. (October).	Iron and Steel Manufacturing	4	No	No	08420



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10.27	EPA-HQ-OW-2015-0665-0413	Telephone and Email Communication Between Chris T. Artrip, SWVA Inc., and Bushra Alam, ERG, Re: 2014 TRI Lead Releases for SWVA Inc., in Huntington, WV. - DCN 08421	Telephone and email conversation between Chris T. Artrip, SWVA Inc., and Bushra Alam, Eastern Research Group, Inc., about 2014 TRI Lead Releases for SWVA Inc., in Huntington, WV.	Meeting Materials	Artrip, Chris	03/23/2016	Artrip, C. 2016. Communication Between Chris T. Artrip, SWVA Inc., and Bushra Alam, ERG, Re: 2014 TRI Lead Releases for SWVA Inc. (March 23).	Iron and Steel Manufacturing	4	No	No	08421
10.27	EPA-HQ-OW-2015-0665-0414	Telephone and Email Communication Between Jason Banks, DW-National Standard-Stillwater LLC, and Bushra Alam, ERG, Re: 2014 TRI Lead and Copper Releases - DCN 08422	Telephone and email conversation between Jason Banks, DW-National Standard- Stillwater LLC, and Bushra Alam, Eastern Research Group, Inc. about 2014 TRI Lead and Copper Releases.	Meeting Materials	Banks, Jason	03/24/2016	Banks, J. 2016. Communication Between Jason Banks, DW-National Standard-Stillwater LLC, and Bushra Alam, ERG, Re: 2014 TRI Releases. (March 24).	Iron and Steel Manufacturing	4	No	No	08422
10.27	EPA-HQ-OW-2015-0665-0415	Telephone and Email Communication Between Doug Bley, ArcelorMittal Burns Harbor, and Kimberly Bartell, ERG. Re: 2014 TRI Lead Discharges - DCN 08423	Telephone and email conversation between Doug Bley, ArcelorMittal Burns Harbor, and Kimberly Bartell, Eastern Research Group, Inc. about 2014 TRI Lead Discharges.	Meeting Materials	Bley, Doug	03/21/2016	Bley, Doug. 2016. Communication Between Doug Bley, ArcelorMittal Burns Harbor, and Kimberly Bartell, ERG, Re: 2014 TRI Lead Discharges. (March 21).	Iron and Steel Manufacturing	5	No	No	08423

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10.27	EPA-HQ-OW-2015-0665-0416	Three Years of Full-Scale Treatment of an Oily Wastewater Using an Immersed Membrane Biological Reactor - DCN 08424	Summary of pilot work that was conducted on an immersed membrane biological reactor (MBR) system, using a prototype of commercially available equipment. The MBR testing results demonstrated that the primary target compounds (BOD5, COD, TSS, BTEX and oil and grease) and metals (arsenic, lead, mercury and zinc) were removed at rates of 85 to 99 percent and were within local discharge limitations.	Publication; Copyrighted Materials	Buckles, J., et al	01/01/2007	Buckles, J., et al. 2007. Three Years of Full-Scale Treatment of an Oily Wastewater Using an Immersed Membrane Biological Reactor. WEFTEC.	Iron and Steel Manufacturing	12	No	Yes	08424
10.27	EPA-HQ-OW-2015-0665-0417	Telephone and Email Communication Between Deborah Calderazzo, Jewel Acquisition LLC- Louisville, and Bushra Alam, ERG. Re: 2014 TRI Lead, Manganese, Nitrate, and Copper Releases at Jewel Acquisition LLC - DCN 08425	Telephone and email conversation between Deborah Calderazzo, Jewel Acquisition LLC- Louisville, and Bushra Alam, Eastern Research Group, Inc. about 2014 TRI Lead, Manganese, Nitrate, and Copper Releases at Jewel Acquisition LLC.	Meeting Materials	Calderazzo, Deborah	03/31/2016	Calderazzo, D. 2016. Communication Between Deborah Calderazzo, Jewel, and Bushra Alam, ERG. Re: 2014 TRI Releases at Jewel Acquisition. (March 31).	Iron and Steel Manufacturing	4	No	No	08425
10.27	EPA-HQ-OW-2015-0665-0418	Telephone and Email Communication Between Rick Clifton, IPSCO Tubular (Kentucky) Inc., and Bushra Alam, ERG, Re: 2014 TRI Lead and Manganese Releases at IPSCO Tubular (Kentucky) Inc. - DCN 08426	Telephone and email conversation between Rick Clifton, IPSCO Tubular (Kentucky) Inc., and Bushra Alam, Eastern Research Group, Inc., about 2014 TRI Lead and Manganese Releases at IPSCO Tubular (Kentucky) Inc.	Meeting Materials	Clifton, Rick	03/23/2016	Clifton, R. 2016. Communication Between Rick Clifton, IPSCO, and Bushra Alam, ERG. Re: 2014 TRI Releases at IPSCO. (March 23).	Iron and Steel Manufacturing	1	No	No	08426

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.27	EPA-HQ-OW-2015-0665-0419	Acid Mine Drain (AMD) Treatment to Achieve Very Low Residual Heavy Metal Concentrations - DCN 08427	Summary of pilot studies using a dissolved air flotation (GEM System) and walnut filters. The GEM System and the walnut filters can be used as a replacement for current technologies.	Publication; Copyrighted Materials	Colic, M., & Hogan, J	01/01/2012	Colic, M., & Hogan, J. 2012. Acid Mine Drain (AMD) Treatment to Achieve Very Low Residual Heavy Metal Concentrations. WEFTEC.	Iron and Steel Manufacturing	23	No	Yes	08427
10.27	EPA-HQ-OW-2015-0665-0420	Heavy Metals Removal by Sand Filters Inoculated with Metal Sorbing and Precipitating Bacteria - DCN 08428	Large volumes of wastewater containing metals such as Cd, Zn, Cu, Pb, Hg, Ni or Co are mainly treated by precipitation processes. However, waters treated in such ways do not always meet regulatory standards. And in many cases, ecotaxes must be paid on the heavy metals load in the discharged water. Therefore, a second polishing treatment is often necessary. The use of sand filters inoculated with heavy metal biosorbing and bioprecipitating bacteria fulfills these objectives.	Publication; Copyrighted Materials	Diels, L., et al	01/01/2003	Diels, L., et al. 2003. Heavy Metals Removal by Sand Filters Inoculated with Metal Sorbing and Precipitating Bacteria. Hydrometallurgy. 71: 235–241.	Iron and Steel Manufacturing	7	No	Yes	08428
10.27	EPA-HQ-OW-2015-0665-1053	Continued Preliminary Category Review – Facility Data Review and Calculations for Point Source Category – 420 –Iron and Steel Manufacturing - DCN 08429	Facility Data Review and Calculations for Point Source Category – 420 – Iron and Steel Manufacturing for the ELG Planning Review Report Supporting the Final 2016 ELG Plan.	Data	ERG	09/01/2016	ERG. 2016. Continued Preliminary Category Review – Facility Data Review and Calculations for PSC – 420 –I&S Manufacturing. Chantilly, VA. (Sept).	Iron and Steel Manufacturing	0	No	No	08429

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.27	EPA-HQ-OW-2015-0665-0421	Pilot Testing of Selenium Removal in a Surface Coal Mine Water Containing High Nitrate and Selenium Concentrations - DCN 08430	Pilot testing of an anoxic fluidized bed reactor (FBR) technology for selenium (Se) removal from runoff water at Teck Coal Limited's Line Creek mining operation was conducted in 2011. Based on pilot testing results, a subsequent conceptual treatment alternatives evaluation identified FBR based treatment to be the most feasible and cost effective technology for full scale application.	Publication; Copyrighted Materials	Gay, M., et al	01/01/2012	Gay, M., et al. 2012. Pilot Testing of Selenium Removal in a Surface Coal Mine Water Containing High Nitrate and Selenium Concentrations. WEFTEC.	Iron and Steel Manufacturing	18	No	Yes	08430
10.27	EPA-HQ-OW-2015-0665-0422	Telephone and Email Communication Between Jonathan Hacker, Valbruna Slater Stainless Inc., and Bushra Alam, ERG. Re: 2014 TRI Copper and Manganese Discharges at Valbruna Slater Stainless Inc. - DCN 08431	Telephone and email conversation between Jonathan Hacker, Valbruna Slater Stainless Inc., and Bushra Alam, Eastern Research Group, Inc., about 2014 TRI Copper and Manganese Discharges at Valbruna Slater Stainless Inc.	Meeting Materials	Hacker, Jonathan	06/23/2016	Hacker, J. 2016. Communication Between Jonathan Hacker, Valbruna, and Bushra Alam, ERG. Re: 2014 TRI Discharges at Valbruna. (June 23).	Iron and Steel Manufacturing	4	No	No	08431
10.27	EPA-HQ-OW-2015-0665-0423	Removal of Selenium in Refinery Effluent with Adsorption Media - DCN 08432	In this study, selenium was removed from various refinery effluent waters, in field applications, and at the source point stripper sour water. In addition, this single pass treatment option also removed vanadium, arsenic, mercury, barium, etc.	Publication; Copyrighted Materials	Hayes, M. & Sherwood, N.	01/01/2012	Hayes, M., & Sherwood, N. 2012. Removal of Selenium in Refinery Effluent with Adsorption Media. WEFTEC.	Iron and Steel Manufacturing	12	No	Yes	08432

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10.27	EPA-HQ-OW-2015-0665-0424	Telephone and Email Communication Between Richard Herman, NLMK Pennsylvania Corp., and Bushra Alam, ERG. Re: 2014 TRI Releases at NLMK Pennsylvania Corp. - DCN 08433	Telephone and email conversation between Richard Herman, NLMK Pennsylvania Corp., and Bushra Alam, Eastern Research Group, Inc., about 2014 TRI Releases at NLMK Pennsylvania Corp.	Meeting Materials	Herman, Richard	03/24/2016	Herman, R. 2016. Communication Between Richard Herman, NLMK, and Bushra Alam, ERG., Re: 2014 TRI Releases at NLMK. (March 24).	Iron and Steel Manufacturing	4	No	No	08433
10.27	EPA-HQ-OW-2015-0665-0425	Microsand Ballasted Flocculation and Clarification: Effects on Removal of TSS, Oil & Grease, and Metals from a Steel Mill Waste Stream. - DCN 08434	A seventeen-day pilot operation demonstrated the feasibility of microsand ballasted flocculation and clarification for removal of TSS, oil & grease, and multiple regulated metals from steel plant wastewater. The process was insensitive to varying influent conditions tested including normal and simulated "worst case" conditions.	Publication; Copyrighted Materials	Kessler, Carol	01/01/2002	Kessler, C. 2002. Microsand Ballasted Flocculation and Clarification: Effects on Removal of TSS, O&G, and Metals from a Steel Mill. WEFTEC.	Iron and Steel Manufacturing	16	No	Yes	08434
10.27	EPA-HQ-OW-2015-0665-0426	Telephone and Email Communication Between Brandon Killian, ADCOM Wire Co., and Bushra Alam, ERG. Re: 2014 TRI Manganese and Nitrate Discharges at ADCOM Wire. Co. - DCN 08435	Telephone and email conversation between Brandon Killian, ADCOM Wire Co., and Bushra Alam, Eastern Research Group, Inc., about 2014 TRI Manganese and Nitrate Discharges at ADCOM Wire. Co.	Meeting Materials	Killian, Brandon	04/04/2016	Killian, B. 2016. Communication Between Brandon Killian, ADCOM Wire Co., and Bushra Alam, ERG. Re: 2014 TRI Discharges. (April 4).	Iron and Steel Manufacturing	4	No	No	08435

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.27	EPA-HQ-OW-2015-0665-0427	Telephone and Email Communication Between Brian Lasko, US Steel, and Kimberly Bartell, ERG. Re: 2014 TRI Lead, Manganese, Copper, and Nitrate Discharges for US Steel facilities. - DCN 08436	Telephone and email conversation between Brian Lasko, US Steel, and Kimberly Bartell, Eastern Research Group, Inc., about 2014 TRI Lead, Manganese, Copper, and Nitrate Discharges.	Meeting Materials	Lasko, Brian	03/31/2016	Lasko, B. 2016. Communication Between Brian Lasko, US Steel, and Kim Bartell, ERG. Re: 2014 TRI Discharges. (March 31).	Iron and Steel Manufacturing	40	No	No	08436
10.27	EPA-HQ-OW-2015-0665-0428	Telephone and Email Communication Between John Lockhart, West Virginia Department of Environmental Protection, and Kimberly Bartell, ERG. Re: OCPSF and Iron and Steel Facility Permitting Practices in West Virginia. - DCN 08437	Telephone and email conversation between John Lockhart, West Virginia Department of Environmental Protection, and Kimberly Bartell, Eastern Research Group, Inc., about OCPSF and Iron and Steel Facility Permitting Practices in West Virginia.	Meeting Materials	Lockhart, John	03/28/2016	Lockhart, J. 2016. Communication Between John Lockhart, WV DEP, and Kim Bartell, ERG. Re: Permitting Practices in West Virginia. (March 28).	Iron and Steel Manufacturing	3	No	No	08437
10.27	EPA-HQ-OW-2015-0665-0429	Telephone and Email Communication Between Sean McGowan, Carpenter Technology Corp., and Bushra Alam, ERG. Re: 2014 TRI Copper Releases at Carpenter Technology Corp. - DCN 08438	Telephone and email conversation between Sean McGowan, Carpenter Technology Corp., and Bushra Alam, Eastern Research Group, Inc., about 2014 TRI Copper Releases at Carpenter Technology Corp.	Meeting Materials	McGowan, Sean	03/29/2016	McGowan, S. 2016. Communication Between Sean McGowan, Carpenter, and Bushra Alam, ERG. Re: 2014 TRI Releases. (March 29).	Iron and Steel Manufacturing	3	No	No	08438

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.27	EPA-HQ-OW-2015-0665-0430	Telephone and Email Communication Between Mike Mieczkowski, ArcelorMittal Weirton LLC, and Bushra Alam, ERG. Re: 2014 TRI Lead, Manganese, and Copper Releases at ArcelorMittal LLC (Weirton) - DCN 08439	Telephone and email conversation between Mike Mieczkowski, ArcelorMittal Weirton LLC, and Bushra Alam, Eastern Research Group, Inc., about 2014 TRI Lead, Manganese, and Copper Releases at ArcelorMittal LLC (Weirton).	Meeting Materials	Mieczkowski, Mike	03/28/2016	Mieczkowski, M. 2016. Communication Between Mike Mieczkowski, ArcelorMittal Weirton LLC, and Bushra Alam, ERG., Re: 2014 TRI Releases. (March 28).	Iron and Steel Manufacturing	6	No	No	08439
10.27	EPA-HQ-OW-2015-0665-0431	Telephone and Email Communication Between Matt Montag, AK Steel Corp Coshocton Works, and Bushra Alam, ERG. Re: 2014 TRI Manganese and Nitrate Discharges at AK Steel Corp. - DCN 08440	Telephone and email conversation between Matt Montag, AK Steel Corp Coshocton Works, and Bushra Alam, ERG, about 2014 TRI Manganese and Nitrate Discharges at AK Steel Corp.	Meeting Materials	Montag, Matt	04/04/2015	Montag, M. 2016. Communication Between Matt Montag, AK Steel Corp Coshocton Works, and Bushra Alam, ERG, Re: 2014 TRI Discharges. (April 4).	Iron and Steel Manufacturing	4	No	No	08440
10.27	EPA-HQ-OW-2015-0665-0432	The Use of Constructed Wetlands in the Treatment of Flue Gas Desulfurization Wastewater - DCN 08441	A major power producer has decided to undertake a constructed wetland treatment system pilot project to evaluate the technology. The constructed wetland, currently in operation, is approximately 2 acres in size and treats approximately 7 percent of the plant FGD wastewater stream.	Publication	Morrison, J., et al.	01/01/2011	Morrison, J., et al. 2011. The Use of Constructed Wetlands in the Treatment of Flue Gas Desulfurization Wastewater. IWC.	Iron and Steel Manufacturing	14	No	No	08441

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.27	EPA-HQ-OW-2015-0665-0433	Aquatic Toxicity Reduction and Water Reuse at a Metal Finishing Plant - DCN 08442	In 2003, the Bon L Manufacturing Company took the final steps to meet the aquatic toxicity requirements of its NPDES permit. Prior to the final steps, Bon L had implemented water and waste minimization measures within the manufacturing plant to reduce water usage and waste generation.	Publication; Copyrighted Materials	Patrick, G., et al.	01/01/2008	Patrick, G., et al. 2008. Aquatic Toxicity Reduction and Water Reuse at a Metal Finishing Plant. WEFTEC.	Iron and Steel Manufacturing	12	No	Yes	08442
10.27	EPA-HQ-OW-2015-0665-0434	Remote High-Altitude Pilot Treatment System for Mining-Impacted Waters - DCN 08443	A mostly-passive pilot treatment system (PTS) consisting of a biochemical reactor (BCR) and an aerobic polishing cell (APC), was installed as part of a treatability study to evaluate this innovative technology in a unique environment. The system was developed to test whether a PTS, that uses less energy and has only intermittent need for operations personnel, can work effectively at high altitudes in extreme cold conditions.	Publication; Copyrighted Materials	Progress, C., et al.	01/01/2012	Progress, C., et al. 2012. Remote High-Altitude Pilot Treatment System for Mining-Impacted Waters. WEFTEC.	Iron and Steel Manufacturing	4	No	Yes	08443
10.27	EPA-HQ-OW-2015-0665-0435	One Automotive Manufacturer: Three Membrane Applications for Wastewater Pretreatment and Reuse - DCN 08444	Automotive manufacturing operations at two Chrysler facilities have recently expanded to increase production and modernize manufacturing processes.	Publication; Copyrighted Materials	Pugh, L., et al.	01/01/2014	Pugh, L., et al. 2014. One Automotive Manufacturer: Three Membrane Applications for Wastewater Pretreatment and Reuse. WEFTEC.	Iron and Steel Manufacturing	27	No	Yes	08444



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.27	EPA-HQ-OW-2015-0665-0436	Telephone and Email Communication Between Stan Rigney, Indiana Department of Environmental Management, and Bushra Alam, ERG. Re: Permitting of Iron and Steel facilities - DCN 08445	Telephone and email conversation between Stan Rigney, Indiana Department of Environmental Management, and Bushra Alam, Eastern Research Group, Inc., about Permitting of Iron and Steel facilities.	Meeting Materials	Rigney, Stan	03/23/2016	Rigney, S. 2016. Communication Between Stan Rigney, IN DEM, and Bushra Alam, ERG. Re: Permitting of Iron and Steel facilities. (March 24).	Iron and Steel Manufacturing	2	No	No	08445
10.27	EPA-HQ-OW-2015-0665-0437	Telephone and Email Communication Between Randall Welsh, O&K American Corp., and Bushra Alam, ERG. Re: 2014 TRI Manganese and Nitrate Releases at O&K American Corp. - DCN 08446	Telephone and email conversation between Randall Welsh, O&K American Corp., and Bushra Alam, Eastern Research Group, Inc. about 2014 TRI Manganese and Nitrate Releases at O&K American Corp.	Meeting Materials	Welsh, R.	04/14/2016	Welsh, R. 2016. Communication Between Randall Welsh, O&K American Corp., and Bushra Alam, ERG. Re: 2014 TRI Releases. (April 14).	Iron and Steel Manufacturing	3	No	No	08446
10.27	EPA-HQ-OW-2015-0665-0438	Reverse Osmosis Applied to Metal Finishing Wastewater - DCN 08447	The electroplating industry is a great water consumer and, as a consequence, one of the biggest producers of liquid effluent. The metal finishing industry presents one of the most critical industrial waste problems. There is therefore growing interest in developing methods for reclaiming metals from plating waste stream and recovery of water using membrane technology. The application of RO to the global effluent from the electroplating industry has been studied in this paper.	Publication; Copyrighted Materials	Benito, Y. & Ruiz, M. L.	01/01/2002	Benito, Y., and Ruiz, M. L. 2002. Reverse Osmosis Applied to Metal Finishing Wastewater. Desalination. 142: 229-234.	Metal Finishing	6	No	Yes	08447

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10.27	EPA-HQ-OW-2015-0665-0439	Water Reuse in an Oil Refinery: An Innovative Solution Using Membrane Technology - DCN 08448	An oil refinery located in Texas, USA is interested in reusing wastewater as process water to achieve two objectives: reduce its potable water consumption and reduce wastewater disposal costs. A pilot study was performed to demonstrate the feasibility of reusing treated wastewater as makeup water for boiler feed and cooling tower. The pilot system consisted of three unit operations: ZeeWeed® UF, strong acid cation exchange softening (IX) and RO.	Publication; Copyrighted Materials	Ginzburg & Cansino	01/01/2009	Ginzburg, B., & Cansino, R. (2009). Water Reuse in an Oil Refinery: An Innovative Solution Using Membrane Technology. Paper presented at the WEFTEC.	Petroleum Refining	11	No	Yes	08448
10.27	EPA-HQ-OW-2015-0665-0440	Selenium Treatment of Mine Water Effluent in a Fluidized Bed Reactor (FBR) - DCN 08449	A pilot study was conducted to evaluate Selenium (Se) removal from a surface coal mine effluent stream by a biological fluidized bed reactor (FBR). FBR treatment technology is well proven for nitrate and perchlorate removal and utilizes heterotrophic facultative bacteria that use oxidized selenium species as electron acceptors and reduce them to elemental Se under anoxic/anaerobic conditions.	Publication; Copyrighted Materials	Munirathinam, K. R.	01/01/2011	Munirathinam, K. R., et al. (2011). Selenium Treatment of Mine Water Effluent in a Fluidized Bed Reactor (FBR). Paper presented at the WEFTEC.	Coal Mining	21	No	Yes	08449
10.27	EPA-HQ-OW-2015-0665-0441	Biological Treatment Helps Remove Nitrate, Sulfate from Mine Runoff - DCN 08450	Nitrate and sulfate are common contaminants in surface water and groundwater associated with mining operations. Three biological treatment systems have successfully removed nitrate and sulfate at the Kettle River Operations near Republic, WA, since their construction in 2005-06. Treatment is accomplished with a combination of engineered reactors and in situ treatment.	Publication; Copyrighted Materials	Reinsel, Mark.	01/01/2010	Reinsel, Mark. (2010). Biological Treatment Helps Remove Nitrate, Sulfate form Mine Runoff. Industrial WaterWorld, 10(1).	Mineral Mining and Processing	2	No	Yes	08450

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10.27	EPA-HQ-OW-2015-0665-0442	Use of ozone in a pilot-scale plant for textile wastewater pre-treatment: Physico-chemical efficiency, degradation by-products identification and environmental toxicity of treated wastewater - DCN 08451	In this study, ozonation of raw textile wastewater was conducted in a pilot-scale plant and the efficiency of this treatment was evaluated based on the parameters color removal and soluble organic matter measured as COD, at two pH values. In conclusion, pre-ozonation of textile wastewater is an important step in terms of improving wastewater biodegradability, as well as reducing acute ecotoxicity, which should be removed completely through sequential biological treatment.	Publication; Copyrighted Materials	Somens, C. A., et al.	10/06/2009	Somens, C. et al. (2010). Use of Ozone in A Pilot-Scale Plant for Textile Wastewater Pre-Treatment. Journal of Hazardous Materials 175, 235- 240.	Textile Mills	6	No	Yes	08451
10.27	EPA-HQ-OW-2015-0665-0443	EPCRA Section 313 Reporting Guidance for Food Processors - DCN 08452	This document is intended to assist establishments and facilities designated by SIC Major Group 20 in complying with the Emergency Planning and Community Right-To-Know Act (EPCRA) Section 313 reporting requirements, the preparation of Form R or Form A. The EPCRA Section 313 program is commonly referred to as TRI.	Publication; USEPA	U.S. EPA	09/01/1998	U.S. EPA. 1998 . EPCRA Section 313 Reporting Guidance for Food Processors. OPPT. EPA-745-R-98-011. (Sept).	Miscellaneous Food and Beverages	160	No	No	08452
10.27	EPA-HQ-OW-2015-0665-0444	2013 TRI Chemical List - DCN 08453	Individually listed EPCRA Section 313 chemicals with CAS numbers arranged alphabetically, then by CAS number.	Publication; USEPA	U.S. EPA	11/25/2013	U.S. EPA. 2014. 2013 TRI Chemical List. Toxics Release Inventory Program. Washington, D.C.		21	No	No	08453

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10.27	EPA-HQ-OW-2015-0665-0445	Comparing Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES) Discharge Monitoring Report (DMR) Data and Toxics Release Inventory (TRI) Data - DCN 08454	This document provides additional background on the two main sources of wastewater pollution data supporting EPA's DMR Pollutant Loading Tool or "Loading Tool" ( <a href="http://cfpub.epa.gov/dmr/">http://cfpub.epa.gov/dmr/</a> ). In particular, this document offers insights on how to compare these two data sources, Discharge Monitoring Reports (DMR) and Toxics Release Inventory (TRI), as well as considerations for analysis and interpretation.	Publication; USEPA	U.S. EPA	12/01/2014	U.S. EPA. 2014. Comparing CWA NPDES DMR Data and TRI Data. Washington, D.C. (Dec).	Iron and Steel Manufacturing	20	No	No	08454
10.27	EPA-HQ-OW-2015-0665-0809	Telephone and Email Communication Between Matt Gill, Alton Steel, and Sara Bossenbroek, ERG. Re: 2014 DMR Manganese Releases - DCN 08541	Telephone and email conversation between Matt Gill, Alton Steel, and Sara Bossenbroek, Eastern Research Group, Inc. about 2014 DMR Manganese Releases.	Meeting Material	Gill, Matt	11/28/2016	Gill, M. 2016. Communication between Matt Gill, Alton Steel, and Sara Bossenbroek, ERG. Re: 2014 DMR Manganese Discharges. (Nov28).	Iron and Steel Manufacturing	3	No	No	08541
10.27	EPA-HQ-OW-2015-0665-0810	Indiana Administrative Code: Title 327 Water Pollution Control Division, Article 2: Water Quality Standards - DCN 08542	Article 2. Water Quality Standards from the Indiana General Assembly. Written standards for water-quality-based limits for the state.	Publication Other Government	Indiana	01/01/2016	Indiana General Assembly. 2016 . Indiana Administrative Code: Title 327 Water Pollution Control Division, Article 2: Water Quality Standards.	Iron and Steel Manufacturing	136	No	No	08542

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.27	EPA-HQ-OW-2015-0665-0811	Telephone and Email Communication Between Patrick Smith, Mountain State Carbon, and Kim Bartell, ERG. Re: 2014 DMR Manganese, Nitrate, and Phosphorus Discharges - DCN 08543	Telephone and email conversation between Patrick Smith, Mountain State Carbon, and Kim Bartell, Eastern Research Group, Inc. about 2014 DMR Manganese, Nitrate, and Phosphorus Discharges.	Meeting Material	Smith, Patrick	11/28/2016	Smith, P. 2016. Communication between Patrick Smith, Mountain State Carbon, and Kim Bartell, ERG. Re: 2014 DMR Discharges. (Nov 28).	Iron and Steel Manufacturing	4	No	No	08543
10.39	EPA-HQ-OW-2015-0665-0473	Telephone Communication Between Reuel Anderson, Nebraska DEQ, and Kimberly Bartell, ERG. Re: 2014 OCPSF Total Residual Chlorine Permitting - DCN 08483	Telephone conversation between Reuel Anderson, Nebraska DEQ, and Kimberly Bartell, Eastern Research Group, Inc. about 2014 OCPSF Total Residual Chlorine Permitting.	Meeting Materials	Anderson, R.	03/23/2016	Anderson, R. 2016. Communication Between Reuel Anderson, NE DEQ, and Kim Bartell, ERG. Re: 2014 OCPSF TRC Permitting. (March 23).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	1	No	No	08483
10.39	EPA-HQ-OW-2015-0665-0474	Telephone and Email Communication Between Bob Burke, Ascend Performance Materials, and Kimberly Bartell, ERG. Re: 2014 TRI Nitrate Discharges - DCN 08484	Telephone and email conversation between Bob Burke, Ascend Performance Materials, and Kimberly Bartell, Eastern Research Group, Inc., about 2014 TRI Nitrate Discharges.	Meeting Materials	Burke, B.	03/30/2016	Burke, B. 2016. Communication Between Bob Burke, Ascend Performance Materials, and Kim Bartell, ERG. Re: 2014 TRI Nitrate Discharges. (March 30).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	12	No	No	08484

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.39	EPA-HQ-OW-2015-0665-0475	Telephone and Email Communication Between Beth Connell, DSM Chemicals NA Inc., and Kimberly Bartell, ERG. Re: 2014 TRI Nitrate Discharges - DCN 08485	Telephone and email conversation between Beth Connell, DSM Chemicals NA Inc., and Kimberly Bartell, Eastern Research Group, Inc., about 2014 TRI Nitrate Discharges.	Meeting Materials	Connell, B.	03/21/2016	Connell, B. 2016. Communication Between Beth Connell, DSM Chemicals NA Inc., and Kimberly Bartell, ERG. Re: 2014 TRI Nitrate Discharges. (March 21).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	5	No	No	08485
10.39	EPA-HQ-OW-2015-0665-1055	Continued Preliminary Category Review – Facility Data Review and Calculations for Point Source Category – 414 – Organic Chemicals, Plastics and Synthetic Fibers - DCN 08486	Facility Data Review and Calculations for Point Source Category 414 - Organic Chemicals, Plastics and Synthetic Fibers for the ELG Planning Review Report Supporting the Final 2016 ELG Plan.	Data	Eastern Research Group (ERG)	09/01/2016	ERG. 2016. Continued Preliminary Category Review – Facility Data Review and Calculations for PSC 414 – OCPSF. Chantilly, VA. (Sept).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	0	No	No	08486
10.39	EPA-HQ-OW-2015-0665-0476	Telephone and Email Communication Between Cari Field, First Chemical Corporation, and Kimberly Bartell, ERG. Re: 2014 TRI Nitrate Discharges - DCN 08487	Telephone and email conversation between Cari Field, First Chemical Corporation, and Kimberly Bartell, Eastern Research Group, Inc., about 2014 TRI Nitrate Discharges.	Meeting Materials	Field, C.	03/23/2016	Field, C. 2016. Communication Between Cari Field, First Chemical Corporation, and Kim Bartell, ERG. Re: 2014 TRI Nitrate Discharges. (March 23).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	5	No	No	08487

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10.39	EPA-HQ-OW-2015-0665-0477	Telephone and Email Communication Between Shannon Gibson, Texas CEQ, and Kimberly Bartell, ERG. Re: 2014 OCPSF Total Residual Chlorine Permitting Processes - DCN 08488	Telephone and email conversation between Shannon Gibson, Texas CEQ, and Kimberly Bartell, Eastern Research Group, Inc., about 2014 OCPSF Total Residual Chlorine Permitting Processes.	Meeting Materials	Gibson, S.	03/23/2016	Gibson, S. 2016. Communication Between Shannon Gibson, Texas CEQ, and Kim Bartell, ERG. Re: 2014 OCPSF TRC Permitting Processes. (March 23).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	6	No	No	08488
10.39	EPA-HQ-OW-2015-0665-0478	Telephone and Email Communication Between Wendy Hieb, Iowa DNR, and Amie Aguiar, ERG. Re: 2014 OCPSF Total Residual Chlorine Permitting - DCN 08489	Telephone and email conversation between Wendy Hieb, Iowa DNR, and Amie Aguiar, Eastern Research Group, Inc., about 2014 OCPSF Total Residual Chlorine Permitting.	Meeting Materials	Hieb, W.	03/23/2016	Hieb, W. 2016. Communication Between Wendy Hieb, Iowa DNR, and Amie Aguiar, ERG. Re: 2014 OCPSF Total Residual Chlorine Permitting. (March 23).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	2	No	No	08489
10.39	EPA-HQ-OW-2015-0665-0479	Telephone and Email Communication Between Eric Hillamn, BASF Corp., and Kimberly Bartell, ERG. Re: 2014 TRI Nitrate Discharges - DCN 08490	Telephone and email conversation between Eric Hillamn, BASF Corp., and Kimberly Bartell, Eastern Research Group, Inc., about 2014 TRI Nitrate Discharges	Meeting Materials	Hillaman, E.	03/30/2016	Hillamn, Eric. 2016. Communication Between Eric Hillamn, BASF Corp., and Kimberly Bartell, ERG. Re: 2014 TRI Nitrate Discharges. (March 30).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	1	No	No	08490

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.39	EPA-HQ-OW-2015-0665-0480	Iowa Department of Natural Resources (IA DNR). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NPDES IA0079456 - The Andersons Denison Ethanol, LLC, Denison, IA - DCN 08491	NPDES Facility Permit and Fact Sheet for The Andersons Denison Ethanol, LLC, Denison, IA - IA0079456.	Permit/ Registration	IA DNR	01/01/2011	IA DNR. 2011. NPDES Permit and Fact Sheet for The Andersons Denison Ethanol, LLC, Denison, IA - IA0079456. (January 1).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	18	No	No	08491
10.39	EPA-HQ-OW-2015-0665-0481	Iowa Department of Natural Resources (IA DNR). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NPDES IA0081043 - Southwest Iowa Renewable Energy, Council Bluffs, IA - DCN 08492	NPDES Facility Permit and Fact Sheet for Southwest Iowa Renewable Energy, Council Bluffs, IA - IA0081043.	Permit/ Registration	IA DNR	10/01/2012	IA DNR. 2012. NPDES Permit and Fact Sheet for Southwest Iowa Renewable Energy, Council Bluffs, IA - IA0081043. (October 1).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	22	No	No	08492
10.39	EPA-HQ-OW-2015-0665-0482	Iowa Department of Natural Resources (IA DNR). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NPDES IA0000205 - Monsanto Company, Muscatine, IA - DCN 08493	NPDES Facility Permit and Fact Sheet for Monsanto Company, Muscatine, IA - IA0000205.	Permit/ Registration	IA DNR	01/01/2012	IA DNR. 2012. NPDES Permit and Fact Sheet for Monsanto Company, Muscatine, IA - IA0000205. (January 1).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	79	No	No	08493



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.39	EPA-HQ-OW-2015-0665-0483	Iowa Department of Natural Resources (IA DNR). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for IA0000256 - Roquette America, Inc., Keokuk, IA - DCN 08494	NPDES Facility Permit and Fact Sheet for Roquette America, Inc., Keokuk, IA - IA0000256.	Permit/Registration	IA DNR	11/09/2012	IA DNR. 2012. NPDES Permit and Fact Sheet for Roquette America, Inc., Keokuk, IA - IA0000256. (November 9).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	60	No	No	08494
10.39	EPA-HQ-OW-2015-0665-0484	Iowa Department of Natural Resources (IA DNR). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for IA0081248 - Plymouth Energy, LLC, Merrill, IA - DCN 08495	NPDES Facility Permit and Fact Sheet for Plymouth Energy, LLC., Merrill, IA - IA0081248.	Permit/Registration	IA DNR	10/01/2013	IA DNR. 2013. NPDES Permit and Fact Sheet for Plymouth Energy, LLC, Merrill, IA - IA0081248. (October 1).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	22	No	No	08495
10.39	EPA-HQ-OW-2015-0665-0485	Iowa Department of Natural Resources (IA DNR). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for IA0082279 - ADM Bioprocessing, Clinton, IA - DCN 08496	NPDES Facility Permit and Fact Sheet for ADM Bioprocessing, Clinton, IA - IA0082279.	Permit/Registration	IA DNR	08/01/2014	IA DNR. 2014. NPDES Permit and Fact Sheet for ADM Bioprocessing, Clinton, IA - IA0082279. (August 1).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	11	No	No	08496

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.39	EPA-HQ-OW-2015-0665-0486	Iowa Department of Natural Resources (IA DNR). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for IA0052535 - New Haven Chemicals Iowa, LLC, Manly, IA - DCN 08497	NPDES Facility Permit and Fact Sheet for New Haven Chemicals Iowa, LLC, Manly, IA - IA0052535.	Permit/Registration	IA DNR	02/15/2016	IA DNR. 2016. NPDES Permit and Fact Sheet for New Haven Chemicals Iowa, LLC, Manly, IA - IA0052535. (February 15).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	62	No	No	08497
10.39	EPA-HQ-OW-2015-0665-0487	Nebraska Department of Environmental Quality (NE DEQ). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NE0134279 - Cornhusker Energy Lexington, LLC, Lexington, NE - DCN 08498	NPDES Facility Permit and Fact Sheet for Cornhusker Energy Lexington, LLC, Lexington, NE - NE0134279.	Permit/Registration	NE DEQ	04/01/2011	NE DEQ. 2011. NPDES Permit and Fact Sheet for Cornhusker Energy Lexington, LLC, Lexington, NE - NE0134279. (April 1).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	52	No	No	08498
10.39	EPA-HQ-OW-2015-0665-0488	Nebraska Department of Environmental Quality (NE DEQ). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NE0137715 - Green Plains Wood River, Wood River, NE - DCN 08499	NPDES Facility Permit and Fact Sheet for Green Plains Wood River, Wood River, NE - NE0137715.	Permit/Registration	NE DEQ	07/01/2012	NE DEQ. 2012. NPDES Permit and Fact Sheet for Green Plains Wood River, Wood River, NE - NE0137715. (July 1).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	17	No	No	08499

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.39	EPA-HQ-OW-2015-0665-0489	Nebraska Department of Environmental Quality (NE DEQ). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NE0138045 - Bridgeport Ethanol LLC, Bridgeport, NE - DCN 08500	NPDES Facility Permit and Fact Sheet for Bridgeport Ethanol LLC, Bridgeport, NE - NE0138045.	Permit/Registration	NE DEQ	04/01/2014	NE DEQ. 2014. NPDES Permit and Fact Sheet for Bridgeport Ethanol LLC, Bridgeport, NE - NE0138045. (April 1).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	37	No	No	08500
10.39	EPA-HQ-OW-2015-0665-0490	Nebraska Department of Environmental Quality (NE DEQ). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NE0131334 - Cargill Corn Milling, Blair, NE - DCN 08501	NPDES Facility Permit and Fact Sheet for Cargill Corn Milling, Blair, NE - NE0131334.	Permit/Registration	NE DEQ	01/01/2015	NE DEQ. 2015. NPDES Permit and Fact Sheet for Cargill Corn Milling, Blair, NE - NE0131334. (January 1).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	63	No	No	08501
10.39	EPA-HQ-OW-2015-0665-0491	Telephone and Email Communication Between Andrew Parker, Honeywell International, and Kimberly Bartell, ERG. Re: 2014 TRI Nitrate Discharges - DCN 08502	Telephone and email conversation between Andrew Parker, Honeywell International, and Kimberly Bartell, Eastern Research Group, Inc., about 2014 TRI Nitrate Discharges.	Meeting Materials	Parker, A.	03/30/2016	Parker, A. 2016. Communication Between Andrew Parker, Honeywell International, and Kim Bartell, ERG. Re: 2014 TRI Nitrate Discharges. (March 30).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	4	No	No	08502

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.39	EPA-HQ-OW-2015-0665-0492	Telephone and Email Communication Between Curt Petrosky, Eastman Chemical Co. PA Operations, and Kimberly Bartell & Amie Aguiar, ERG. Re: 2014 TRI Nitrate Discharges - DCN 08503	Telephone and email conversation between Curt Petrosky, Eastman Chemical Co. PA Operations, and Kimberly Bartell & Amie Aguiar, Eastern Research Group, Inc., about 2014 TRI Nitrate Discharges.	Meeting Materials	Petrosky, C.	03/23/2016	Petrosky, C. 2016. Communication Between Curt Petrosky, Eastman Chemical Co. and Kim Bartell & Amie Aguiar, ERG. Re: Nitrate Discharges. (March 23).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	3	No	No	08503
10.39	EPA-HQ-OW-2015-0665-0493	Telephone and Email Communication Between Frenda Smith, Eastman Chemical Co. TN Operations, and Kimberly Bartell, ERG. Re: 2014 TRI Nitrate Discharges - DCN 08504	Telephone and email conversation between Frenda Smith, Eastman Chemical Co. TN Operations, and Kimberly Bartell, Eastern Research Group, Inc., about 2014 TRI Nitrate Discharges.	Meeting Materials	Smith, F.	03/21/2016	Smith, F. 2016. Communication Between Frenda Smith, Eastman Chemical Co., and Kim Bartell, ERG. Re: 2014 TRI Nitrate Discharges. (March 21).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	3	No	No	08504
10.39	EPA-HQ-OW-2015-0665-0494	Texas Commission on Environmental Quality (TCEQ). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for TX0005061 - Goodyear Tire & Rubber Co., Beaumont, TX - DCN 08505	NPDES Facility Permit and Fact Sheet for Goodyear Tire & Rubber Co., Beaumont, TX - TX0005061.	Permit/ Registration	TCEQ	11/28/2007	TCEQ. 2007. NPDES Permit and Fact Sheet for Goodyear Tire & Rubber Co., Beaumont, TX - TX0005061. (November 28).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	83	No	No	08505

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.39	EPA-HQ-OW-2015-0665-0495	Texas Commission on Environmental Quality (TCEQ). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for TX0006084 - Rohmax USA, , Deer Park, TX - DCN 08506	NPDES Facility Permit and Fact Sheet for Goodyear Tire & Rubber Co., Rohmax USA, Deer Park, TX - TX0006084.	Permit/ Registration	TCEQ	12/18/2009	TCEQ. 2009. NPDES Permit and Fact Sheet: for Rohmax USA, , Deer Park, TX - TX0006084. (December 18).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	161	No	No	08506
10.39	EPA-HQ-OW-2015-0665-0496	Texas Commission on Environmental Quality (TCEQ). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for TX0077577 - Ineos Nitriles USA LLC. Green Lake Plant, Port Lavaca, TX - DCN 08507	NPDES Facility Permit and Fact Sheet for Ineos Nitriles USA LLC. Green Lake Plant, Port Lavaca, TX - TX0077577.	Permit/ Registration	TCEQ	08/25/2015	TCEQ. 2015. NPDES Permit and Fact Sheet for Ineos Nitriles USA LLC. Green Lake Plant, Port Lavaca, TX - TX0077577. (August 25).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	81	No	No	08507
10.39	EPA-HQ-OW-2015-0665-0497	Texas Commission on Environmental Quality (TCEQ). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for TX0006017 - Oxea Bay City Plant, Bay City, TX - DCN 08508	NPDES Facility Permit and Fact Sheet for Oxea Bay City Plant, Bay City, TX - TX0006017.	Permit/ Registration	TCEQ	01/13/2016	TCEQ. 2016. NPDES Permit and Fact Sheet for Oxea Bay City Plant, Bay City, TX - TX0006017. (January 13).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	71	No	No	08508

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.39	EPA-HQ-OW-2015-0665-0498	Texas Commission on Environmental Quality (TCEQ). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for TX0003531 - Equistar Chemicals Channelview Complex, Houston, TX - DCN 08509	NPDES Facility Permit and Fact Sheet for Equistar Chemicals Channelview Complex, Houston, TX - TX0003531.	Permit/ Registration	TCEQ	04/13/2016	TCEQ. 2016. NPDES Permit and Fact Sheet for Equistar Chemicals Channelview Complex, Houston, TX - TX0003531. (April 13).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	119	No	No	08509
10.39	EPA-HQ-OW-2015-0665-0499	Telephone and Email Communication Between Greg Twait, Invista Sarl Camden May Plant, and Amie Aguiar, ERG. Re: 2014 TRI Nitrate Discharges - DCN 08510	Telephone and email conversation between Greg Twait, Invista Sarl Camden May Plant, and Amie Aguiar, ERG. Re: 2014 TRI Nitrate Discharges.	Meeting Materials	Twait, G.	03/21/2016	Twait, G. 2016. Communication Between Greg Twait, Invista Sarl Camden May Plant, and Amie Aguiar, ERG. Re: 2014 TRI Nitrate Discharges. (March 21).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	2	No	No	08510
10.39	EPA-HQ-OW-2015-0665-0500	Table of POTW Removals - DCN 08511	TRI POTW Removals Used in the DMR Loading Tool n 2016.	Data	U.S. EPA	01/01/2016	U.S. EPA. 2016. Table of POTW Removals. Washington, D.C. Available online at: <a href="https://cfpub.epa.gov/dmr/">https://cfpub.epa.gov/dmr/</a> .	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	1	No	No	08511

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.39	EPA-HQ-OW-2015-0665-0501	National Recommended Water Quality Criteria - Aquatic Life Criteria Table - DCN 08512	U.S. EPA national recommended water quality criteria, specifically for aquatic life. Aquatic life criteria for toxic chemicals are the highest concentration of specific pollutants or parameter in water that are not expected to pose a significant risk to the majority of species in a given environment.	Publication; US EPA	U.S. EPA	07/28/2016	U.S. EPA. 2016. National Recommended Water Quality Criteria - Aquatic Life Criteria Table. Washington, D.C. (July).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	10	No	No	08512
10.39	EPA-HQ-OW-2015-0665-0502	Organic Chemicals, Plastics and Synthetic Fibers Effluent Guidelines Webpage - DCN 08513	The OCPSF Effluent Guidelines and Standards are incorporated into NPDES (National Pollutant Discharge Elimination System) permits for direct dischargers, and permits or other control mechanisms for indirect dischargers (see Pretreatment Program).	Publication; US EPA	U.S. EPA	02/01/2016	U.S. EPA. 2016. Organic Chemicals, Plastics and Synthetic Fibers Effluent Guidelines. Washington, D.C.	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	4	No	No	08513
10.39	EPA-HQ-OW-2015-0665-0503	Table of Regulated Drinking Water Contaminants - DCN 08514	U.S. EPA Table of Regulated Drinking Water Contaminants.	Publication; US EPA	U.S. EPA	07/15/2016	U.S. EPA. 2016. Table of Regulated Drinking Water Contaminants. Washington, D.C. (July).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	19	No	No	08514

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.39	EPA-HQ-OW-2015-0665-0504	West Virginia Department of Environmental Protection (WV DEP). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for WV0005169 - Bayer Material Science, New Martinsville, WV - DCN 08515	NPDES Facility Permit and Fact Sheet for Bayer Material Science, New Martinsville, WV - WV0005169.	Permit/ Registration	WV DEP	01/25/2013	WV DEP. 2013. NPDES Permit and Fact Sheet for Bayer Material Science, New Martinsville, WV - WV0005169. (January 25).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	288	No	No	08515
10.39	EPA-HQ-OW-2015-0665-0505	West Virginia Department of Environmental Protection (WV DEP). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for WV0000841 - Sabic Innovative Plastics US LLC Washington, WV - DCN 08516	NPDES Facility Permit and Fact Sheet for Sabic Innovative Plastics US LLC., Washington, WV - WV0000841.	Permit/ Registration	WV DEP	06/29/2013	WV DEP. 2013. NPDES Permit and Fact Sheet for Sabic Innovative Plastics US LLC., Washington, WV - WV0000841. (June 29).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	169	No	No	08516
10.39	EPA-HQ-OW-2015-0665-0506	West Virginia Department of Environmental Protection (WV DEP). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for WV0000787 - Cytec Industries Inc., Belmont, WV - DCN 08517	NPDES Facility Permit and Fact Sheet for Cytec Industries Inc., Belmont, WV - WV0000787.	Permit/ Registration	WV DEP	09/28/2015	WV DEP. 2015. NPDES Permit and Fact Sheet for Cytec Industries Inc., Belmont, WV - WV0000787. (September 28).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	99	No	No	08517



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.39	EPA-HQ-OW-2015-0665-0507	West Virginia Department of Environmental Protection (WV DEP). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for WV0116416 - Kureha PGA, LLC., Belle, WV - DCN 08518	NPDES Permit and Fact Sheet for Kureha PGA, LLC., Belle, WV - WV0116416.	Permit/Registration	WV DEP	09/29/2015	WV DEP. 2015. NPDES Permit and Fact Sheet for Kureha PGA, LLC., Belle, WV - WV0116416. (September 29).	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	30	No	No	08518
10.39	EPA-HQ-OW-2015-0665-0508	Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses - DCN 08519	Data on toxicity to aquatic plants are examined to determine whether plants are likely to be unacceptably affected by concentrations that should not cause unacceptable effects on animals. Data on bioaccumulation by aquatic organisms are used to determine if residues might subject edible species to restrictions by the U.S. Food and Drug Administration or if such residues might harm some wildlife consumers of aquatic life.	Publication; US EPA	U.S. EPA	01/01/1985	U.S. EPA. 1985. Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses.	OCPSF (Organic Chemicals, Plastics and Synthetic Fibers)	59	No	No	08519
10.42	EPA-HQ-OW-2015-0665-0380	CAS registry and CAS registry number FAQs - DCN 08384	CAS registry frequently asked questions.	Fact/Data Sheet	CAS	10/28/2016	Chemical Abstracts Service. (2016). CAS registry and FAQs. Available online at: <a href="https://www.cas.org/content/chemical-substances/faqs">https://www.cas.org/content/chemical-substances/faqs</a> .	Pesticide Chemicals Manufacturing, Formulation and Repackaging,	3	No	No	08384

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.42	EPA-HQ-OW-2015-0665-0381	TRI and DMR Data Review for Pesticide Active Ingredients - DCN 08385	Summary of 2010 through 2015 Toxics Release Inventory and Discharge Monitoring Report data for Pesticides Active Ingredients reviewed for the ELG Planning Review Report Supporting the Final 2016 ELG Plan.	Data	ERG	11/01/2016	ERG. (2016). Eastern Research Group, Inc. TRI and DMR Data Review for Pesticide Active Ingredients. Chantilly, VA. (November).	Pesticide Chemicals Manufacturing, Formulation and Repackaging,	0	No	No	08385
10.42	EPA-HQ-OW-2015-0665-0382	Hazardous Substances Data Bank (HSDB): A Toxicology Data Network (TOXNET) Database - DCN 08386	Toxicology database that focuses on the toxicology of potentially hazardous chemicals. Provides information on human exposure, industrial hygiene, emergency handling procedures, environmental fate, regulatory requirements, nanomaterials, and related areas.	Data	HSDB	10/17/2016	HSDB. (2016). Hazardous Substances Data Bank: TOXNET Database. (October). Available online at: <a href="https://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB">https://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB</a> .	Pesticide Chemicals Manufacturing, Formulation and Repackaging,	80	No	No	08386
10.42	EPA-HQ-OW-2015-0665-0383	Pesticide Action Network (PAN) Pesticide Database - DCN 08387	Toxicity and regulatory information for pesticides.	Data	Kegley, S. E., et al.	12/02/2016	Kegley, S. E., et al. (2016). Pesticide Action Network, North America. PAN Pesticide Database. Available online at: <a href="http://www.pesticideinfo.org">http://www.pesticideinfo.org</a> .	Pesticide Chemicals Manufacturing, Formulation and Repackaging,	1	No	No	08387

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.42	EPA-HQ-OW-2015-0665-0384	PubChem Compound Database - DCN 08388	PubChem Compound Database compiled by the National Center for Biotechnology Information. Validated chemical depiction information that are pre-clustered and cross-referenced by identity and similarity groups.	Data	NCBI	12/02/2016	NCBI. (2016). National Center for Biotechnology Information. PubChem Compound Database. Available online at: <a href="https://www.ncbi.nlm.nih.gov/pccompound">https://www.ncbi.nlm.nih.gov/pccompound</a> .	Pesticide Chemicals Manufacturing, Formulation and Repackaging	1	No	No	08388
10.42	EPA-HQ-OW-2015-0665-0385	Email Communication Between Claudia Niess, U.S. EPA Office of Pesticide Programs, and Emily Trentacoste, U.S. EPA Office of Water. Re: Another Pesticide Question - DCN 08389	Email Communication Between Claudia Niess, U.S. EPA Office of Pesticide Programs, and Emily Trentacoste, U.S. EPA Office of Water, discussing pesticide active ingredient use.	E-mail	Niess, Claudia	12/28/2016	Niess, C. (2016). Email Communication Between Claudia Niess, EPA OPP, and Emily Trentacoste, EPA OW. Re: Another Pesticide Question. (Dec 28).	Pesticide Chemicals Manufacturing, Formulation and Repackaging	2	No	No	08389
10.42	EPA-HQ-OW-2015-0665-0386	Chemical Aquatic Fate and Effects (CAFE) Database - DCN 08390	In response to increasing need of rapid and accurate environmental assessments of chemical spills, the Emergency Response Division (ERD) of NOAA's Office of Response and Restoration developed the CAFE Database. This user-friendly computer software system serves as a tool to aid responders in their assessment of the environmental impacts that may arise from chemical spills in situations where critical decisions need to be made within a few hours after a spill occurs.	Data	NOAA	05/01/2016	NOAA. (2016). Office of Response and Restoration, Emergency Response Division. CAFE Database. Version 1.2 [Computer Software].	Pesticide Chemicals Manufacturing, Formulation and Repackaging	2	No	No	08390

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.42	EPA-HQ-OW-2015-0665-0387	Chemical Aquatic Fate and Effects (CAFE) Database: User Manual - DCN 08391	User guide to the CAFE database, a user-friendly computer software system serves as a tool to aid responders in their assessment of the environmental impacts that may arise from chemical spills in situations where critical decisions need to be made within a few hours after a spill occurs. Developed by the Emergency Response Division (ERD) of NOAA's Office of Response and Restoration.	Fact/Data Sheet	NOAA	05/01/2016	NOAA. (2016). Chemical Aquatic Fate and Effects (CAFE) Database: User Manual. Version 1.2. Seattle, WA. (May).	Pesticide Chemicals Manufacturing, Formulation and Repackaging	94	No	No	08391
10.42	EPA-HQ-OW-2015-0665-0388	Pesticide chemical search: Conventional, antimicrobial and biopesticide active ingredients - DCN 08392	Pesticide chemical search for conventional, antimicrobial, and biopesticide active ingredients from the Office of Pesticide Programs.	Data	OPP	10/01/2016	OPP. (2016). Office of Pesticide Programs. Pesticide chemical search: Conventional, antimicrobial and biopesticide active ingredients.	Pesticide Chemicals Manufacturing, Formulation and Repackaging	1	No	No	08392
10.42	EPA-HQ-OW-2015-0665-0389	Office of Pesticides Programs Information Network- DCN 08393	Website for Office of Pesticides resources	Data	OPPIN	10/01/2016	OPPIN. (2016). Office of Pesticides Programs Information Network. Available online at: <a href="https://www.epa.gov/pesticides">https://www.epa.gov/pesticides</a> .	Pesticide Chemicals Manufacturing, Formulation and Repackaging	3	No	No	08393

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.42	EPA-HQ-OW-2015-0665-0390	Email Communication Between Steve Robbins, U.S. EPA Office of Pesticide Programs, and Emily Trentacoste, U.S. EPA Office of Water. Re: PRISM information for OW - DCN 08394	Email communication between Steve Robbins, U.S. EPA Office of Pesticide Programs, and Emily Trentacoste, U.S. EPA Office of Water about PRISM information for OW.	E-mail	Robbins, Steve	11/16/2016	Robbins, S. (2016). Email Communication Between Steve Robbins, EPA OPP, and Emily Trentacoste, U.S. EPA OW. Re: PRISM information for OW. (Nov 16).	Pesticide Chemicals Manufacturing, Formulation and Repackaging	1	No	No	08394
10.42	EPA-HQ-OW-2015-0665-0391	Telephone Communication Between Chuck Ruple, U.S. EPA Region 6 Pesticides Section, and Emily Trentacoste, U.S. EPA Office of Water. Re: EPA Section Seven Tracking System - DCN 08395	Telephone communication between Chuck Ruple, U.S. EPA Region 6 Pesticides Section, and Emily Trentacoste, U.S. EPA Office of Water about the Section Seven Tracking System.	Meeting Materials	Ruple, Chuck	07/07/2016	Ruple, C. (2016). Telephone communication between Chuck Ruple, EPA Region 6, and Emily Trentacoste, EPA OW. Re: Using PRISM-SSTS. (June 30).	Pesticide Chemicals Manufacturing, Formulation and Repackaging	1	No	No	08395
10.42	EPA-HQ-OW-2015-0665-0392	Final Development Document for Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards for the Pesticide Chemicals Point Source Category - DCN 08396	Final development document for the Pesticide Chemicals ELGs.	Publication; USEPA	U.S. EPA	09/01/1993	U.S. EPA. (1993). Development Document for ELGs for the Pesticide Chemicals Point Source Category. (Sept). EPA-821-R-93-016.	Pesticide Chemicals Manufacturing, Formulation and Repackaging	385	No	No	08396

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.42	EPA-HQ-OW-2015-0665-0393	Federal Register Notice: Pesticide Chemicals Category Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards - DCN 08397	Pesticide Chemicals Manufacturing Point Source Category ELGs 1993 FR Notice, 58 FR 50638.	Publication; USEPA	U.S. EPA	09/28/1993	U.S. EPA. (1993). FR Notice: Pesticide Chemicals Category ELGs. (Sept).	Pesticide Chemicals Manufacturing, Formulation and Repackaging	63	No	No	08397
10.42	EPA-HQ-OW-2015-0665-0394	Federal Register Notice: Pesticide Chemicals Category, Formulating, Packaging, and Repackaging Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards - DCN 08398	Pesticide Chemicals Manufacturing Point Source Category ELGs 1996 FR Notice, 61 FR 57518.	Publication; USEPA	U.S. EPA	11/06/1996	U.S. EPA. (1996). FR Notice: Pesticide Chemicals Category ELGs. (Nov).	Pesticide Chemicals Manufacturing, Formulation and Repackaging	49	No	No	08398
10.42	EPA-HQ-OW-2015-0665-0395	Sustainable Futures/P2 Framework Manual. Chapter 5: Estimating Physical/Chemical and Environmental Fate Properties with EPI Suite - DCN 08399	Estimation Programs Interface (EPI) Suite guidance.	Publication; USEPA	U.S. EPA	01/01/2012	U.S. EPA. (2012). Sustainable Futures/P2 Framework Manual. Chapter 5: Estimating Properties with EPI Suite. EPA-748-B12-001.	Pesticide Chemicals Manufacturing, Formulation and Repackaging	22	No	No	08399

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10.42	EPA-HQ-OW-2015-0665-0396	Pesticide Registration Manual - DCN 08400	Manual describes EPA's review and decision-making process for registering a pesticide product and its use.	Publication; USEPA	U.S. EPA	10/01/2016	U.S. EPA. (2016). Pesticide Registration Manual. Available online at: <a href="https://www.epa.gov/pesticide-registration/pesticide-registration-manual">https://www.epa.gov/pesticide-registration/pesticide-registration-manual</a> .	Pesticide Chemicals Manufacturing, Formulation and Repackaging	4	No	No	08400
10.42	EPA-HQ-OW-2015-0665-0397	Pesticide Registration Information System (PRISM) - DCN 08401	PRISM provides a centralized source of information on all registered pesticide products, including chemical composition, toxicity, name and address of registrant, brand names, registration actions, and related data.	Data	U.S. EPA	10/01/2016	U.S. EPA. (2016). Pesticide Registration Information System (PRISM). Non-CBI information available online.	Pesticide Chemicals Manufacturing, Formulation and Repackaging	6	No	No	08401
10.42	EPA-HQ-OW-2015-0665-0398	Section Seven Tracking System (SSTS) database - DCN 08402	Registration and reporting system for pesticide establishments.	Data	U.S. EPA	10/01/2016	U.S. EPA. (2016). Section Seven Tracking System (SSTS) database. Non-CBI information available online.	Pesticide Chemicals Manufacturing, Formulation and Repackaging	4	No	No	08402

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10.49	EPA-HQ-OW-2015-0665-0446	Mathematical modeling of biological selenium removal from flue gas desulfurization (FGD) wastewater treatment - DCN 08455	This paper presents full-scale flue gas desulfurization wastewater treatment plant data on selenium concentration and speciation, and proposes a model that addresses the reductive competition between denitrifies and Selenium Reducing Bacteria.	Publication; Copyrighted Materials	Andalib, M.	01/01/2016	Andalib, et al. 2016. Mathematical modeling of biological selenium removal from flue gas desulfurization (FGD) wastewater treatment. WEFTEC.	Pulp, Paper, and Paperboard	21	No	Yes	08455
10.49	EPA-HQ-OW-2015-0665-0447	Selenium Treatment System Evaluation Report - DCN 08456	Facility completed the construction of a selenium treatment system in June 2011. This paper presents selenium treatment system data.	Publication	Coal Mac, Inc.	06/01/2011	Coal Mac, Inc. 2011. Selenium treatment system evaluation report.	Pulp, Paper, and Paperboard	3	No	No	08456
10.49	EPA-HQ-OW-2015-0665-0448	Connecticut Department of Energy & Environmental Protection (CT DEEP). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NPDES CT0000434 - Ahlstrom Nonwovens, Windsor Locks, CT - DCN 08457	NPDES Facility Permit and Fact Sheet for Ahlstrom Nonwovens, Windsor Locks, CT - CT0000434.	Publication; Copyrighted Materials	CT DEEP	09/24/2009	CT DEEP. 2009. NPDES Permit and Fact Sheet for Ahlstrom Nonwovens, Windsor Locks, CT - CT0000434. (September 24).	Pulp, Paper, and Paperboard	45	No	Yes	08457



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10.49	EPA-HQ-OW-2015-0665-0449	Connecticut Department of Energy & Environmental Protection (CT DEEP). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NPDES CT0026476 - Algonquin Power Cogeneration Facility, Windsor Locks, CT - DCN 08458	NPDES Facility Permit and Fact Sheet for Algonquin Power Cogeneration Facility, Windsor Locks, CT - CT0026476.	Permit, Registration	CT DEEP	01/27/2011	CT DEEP. 2011. NPDES Permit and Fact Sheet for Algonquin Power Cogeneration Facility, Windsor Locks, CT - CT0026476. (January 27).	Pulp, Paper, and Paperboard	36	No	No	08458
10.49	EPA-HQ-OW-2015-0665-0450	Connecticut Department of Energy & Environmental Protection (CT DEEP). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NPDES CT0003212 - Kimberly-Clark Corporation, New Milford, CT - DCN 08459	NPDES Facility Permit and Fact Sheet for Kimberly-Clark Corporation, New Milford, CT - CT0003212.	Permit, Registration	CT DEEP	02/16/2011	CT DEEP. 2011. NPDES Permit and Fact Sheet for Kimberly-Clark, New Milford, CT - CT0003212. (February 16).	Pulp, Paper, and Paperboard	22	No	No	08459
10.49	EPA-HQ-OW-2015-0665-0451	Development and Implementation of a Novel Sulfur Removal Process from H2S Containing Wastewaters - DCN 08460	A novel dissolved sulfide removal wastewater treatment process was developed and implemented in a membrane bioreactor (MBR) treating anaerobically pre-treated industrial (pulp and paper) wastewater at the Gippssland Water Factory.	Publication	Daigger, G. T., et al.	01/01/2013	Daigger, G. T., et al. 2013. Development and Implementation of a Novel Sulfur Removal Process from H2S Containing Wastewaters. WEFTEC.	Pulp, Paper, and Paperboard	13	No	No	08460

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10.49	EPA-HQ-OW-2015-0665-0452	Pilot Study of Pulp & Paper Mill Effluent Treatment with MBR-RO System - DCN 08461	A paper mill in the southwestern United States currently discharges all of its wastewater to a municipal wastewater plant for treatment. A pilot study was conducted for two months using MBR and RO directly treating the wastewater from the paper mill.	Publication; Copyrighted Materials	Dhagumudi, V.	01/01/2012	Dhagumudi, Vetrivel. 2012. Pilot Study of Pulp & Paper Mill Effluent Treatment with MBR-RO System. WEFTEC.	Pulp, Paper, and Paperboard	13	No	Yes	08461
10.49	EPA-HQ-OW-2015-0665-1054	Continued Preliminary Category Review – Facility Data Review and Calculations for Point Source Category 430 – Pulp and Paper - DCN 08462	Facility Data Review and Calculations for Point Source Category 430 – Pulp and Paper for the ELG Planning Review Report Supporting the Final 2016 ELG Plan.	Data	ERG	09/01/2016	ERG. 2016. Continued Preliminary Category Review – Facility Data Review and Calculations for PSC 430 – Pulp and Paper. Chantilly, VA. (Sept).	Pulp, Paper, and Paperboard	0	No	No	08462
10.49	EPA-HQ-OW-2015-0665-0453	Pilot Testing of Selenium Removal in a Surface Coal Mine Water Containing High Nitrate and Selenium Concentrations - DCN 08463	Pilot testing of an anoxic fluidized bed reactor (FBR) technology for selenium (Se) removal from runoff water at Teck Coal Limited's Line Creek mining operation was conducted in 2011. Based on pilot testing results, a subsequent conceptual treatment alternatives evaluation identified FBR based treatment to be the most feasible and cost effective technology for full scale application.	Publication; Copyrighted Materials	Gay, M., et al.	01/01/2012	Gay, M., et al. 2012. Pilot Testing of Selenium Removal in a Surface Coal Mine Water Containing High Nitrate and Selenium Concentrations. WEFTEC.	Pulp, Paper, and Paperboard	18	No	Yes	08463

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10.49	EPA-HQ-OW-2015-0665-0454	Selenium Recovery for Beneficial Reuse from Zinc Smelting Processing at Low pH Conditions - DCN 08464	Summary of a research project to validate a selenium recovery process using vortex based anti-fouling membrane technology.	Publication; Copyrighted Materials	Kim, J.K., et al.	01/01/2013	Kim, J.K., et al. 2013. Selenium Recovery for Beneficial Reuse from Zinc Smelting Processing at Low pH Conditions.	Pulp, Paper, and Paperboard	11	No	Yes	08464
10.49	EPA-HQ-OW-2015-0665-0455	Full Scale Application of Ozone for Bulking Control at a Pulp &Paper Facility - DCN 08465	This paper is focused on the application of ozone for bulking control at full scale in a pulp and paper facility which treats about 350 m3/hr of flow. The goal of ozonation was to reduce and to reliably maintain DSVI (ml/g) at target values that enable good settling.	Publication; Copyrighted Materials	Larrea, A., et al.	01/01/2013	Larrea, A., et al. 2013. Full Scale Application of Ozone for Bulking Control at a Pulp &Paper Facility. WEFTEC.	Pulp, Paper, and Paperboard	10	No	Yes	08465
10.49	EPA-HQ-OW-2015-0665-0456	Piloting Conventional and Emerging Industrial Wastewater Treatment Technologies for the Treatment of Oil Sands Process Affected Water - DCN 08466	In 2010-2011, Suncor Energy piloted several conventional and emerging industrial wastewater treatment technologies on tailings water. Among the technologies examined were Dissolved Air Flootation, Ultrafiltration (UF), Reverse-Osmosis (RO), Advanced Oxidation (Ozone-Peroxide based), suspended-growth biological systems and attached-growth biological systems. This paper summarizes the performance and challenges observed over the course of this pilot.	Publication	Mah, R. et al.	01/01/2011	Mah, R. et al. 2011. Piloting conventional and emerging treatment technologies for the treatment of oil sands process affected water.	Pulp, Paper, and Paperboard	16	No	No	08466

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10.49	EPA-HQ-OW-2015-0665-0457	Bench- and Pilot-Scale Testing of Ion Exchange and Zero Valent Iron Technologies for Selenium Removal from a Surface Coal Mine Run-Off Water - DCN 08467	Bench- and pilot-scale testing was conducted for removal of selenium from runoff water at a surface coal mining operation in 2011. The study focused on two technologies for selenium removal: ion exchange (IX) and zero-valent iron (ZVI).	Publication; Copyrighted Materials	Martins, K. et al.	01/01/2012	Martins, et al. 2012. Testing of ion exchange and zero valent iron technologies for selenium removal from a surface coal mine run-off water.	Pulp, Paper, and Paperboard	21	No	Yes	08467
10.49	EPA-HQ-OW-2015-0665-0458	Telephone and Email Communication Between Art Mauger, Connecticut Department of Energy & Environmental Protection, and Kimberly Bartell, ERG. Re: Pulp and Paper Mill Permitting Practices in Connecticut - DCN 08468	Telephone and email conversation between Art Mauger, Connecticut Department of Energy & Environmental Protection, and Kimberly Bartell, Eastern Research Group, Inc., about Pulp and Paper Mill Permitting Practices in Connecticut.	Meeting Materials	Mauger, A.	03/28/2016	Mauger, A. 2016. Communication Between Art Mauger, CT DEEP, and Kim Bartell, ERG. Re: Pulp Mill Permitting Practices in Connecticut. (March 28).	Pulp, Paper, and Paperboard	3	No	No	08468
10.49	EPA-HQ-OW-2015-0665-0459	Selenium Removal from a Refinery Wastewater: Integrated Approach from Source Control to Wastewater Treatment - DCN 08469	This paper discusses a study conducted to identify main sources of selenium in the process waste streams and lab tests to identify the most feasible treatment technology to reduce selenium.	Publication	Mauro, M. et al.	01/01/2013	Mauro, et al. 2013. Selenium removal from a refinery wastewater: Integrated approach from source control to wastewater treatment. CH2M HILL.	Pulp, Paper, and Paperboard	18	No	No	08469

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10.49	EPA-HQ-OW-2015-0665-0460	Selenium Removal from Refinery Wastewater via Iron Co-Precipitation in a Mobile Clarifier - DCN 08470	Paper discusses a variety of technologies for both point source and total plant effluent treatment to more reliably and consistently meet selenium discharge requirements.	Publication; Copyrighted Materials	McCloskey and Jettinghoff	01/01/2009	McCloskey, C. and T. Jettinghoff. 2009. Selenium removal from refinery wastewater via iron co-precipitation in a mobile clarifier.	Pulp, Paper, and Paperboard	7	No	Yes	08470
10.49	EPA-HQ-OW-2015-0665-0471	National Council for Air and Stream Improvement, Inc. Letter from Paul Wiegand, NCASI, to William Swietlik, U.S. EPA, and Kimberly Bartell, ERG. Re: Nutrients in Pulp and Paper Mill Treated Effluents - DCN 08471	Letter from Paul Wiegand, National Council for Air and Stream Improvement, Inc. to William Swietlik, U.S. EPA, and Kimberly Bartell, ERG, about nutrients in pulp and paper mill treated effluents.	Publication; Copyrighted Materials	NCASI	12/22/2016	NCASI. 2016. Letter from Paul Wiegand, NCASI, to Bill Swietlik, U.S. EPA, and Kim Bartell, ERG. RE: Nutrients in Treated Effluents. (December 22).	Pulp, Paper, and Paperboard	250	No	Yes	08471
10.49	EPA-HQ-OW-2015-0665-0472	National Council for Air and Stream Improvement, Inc. Letter from Diana Cook, NCASI, to William Swietlik, U.S. EPA. Re: Manganese, Cadmium, and Selenium in Pulp and Paper Mill Treated Effluents - DCN 08472	Letter from Diana Cook, National Council for Air and Stream Improvement, Inc. to William Swietlik, U.S. EPA, and Kimberly Bartell, ERG, about manganese, cadmium, and selenium in pulp and paper mill treated effluents.	Memorandum	NCASI	03/28/2017	NCASI. 2017. Letter from Diana Cook, NCASI, to Bill Swietlik, U.S. EPA. RE: Manganese, Cadmium, and Selenium in Treated Effluents. (March 28).	Pulp, Paper, and Paperboard	12	No	No	08472

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10.49	EPA-HQ-OW-2015-0665-0461	Strong Enough? Piloting Aerobic vs. Anaerobic Treatment for Food and Beverage Wastewater - DCN 08473	Paper discusses pilot testing conducted to determine the most cost effected treatment scheme to treat wastewater from a food and beverage manufacturer prior to discharge to a nearby receiving stream.	Publication; Copyrighted Materials	Riedel, D., et al.	01/01/2015	Riedel, et al. 2015. Strong enough? Piloting aerobic vs. anaerobic treatment for food and beverage wastewater. WEFTEC.	Pulp, Paper, and Paperboard	15	No	Yes	08473
10.49	EPA-HQ-OW-2015-0665-0462	Telephone and Email Communication Between Jerry Schwartz and Paul Wiegand, American Forest and Paper Association and National Council for Air and Stream Improvement, Inc. and Kimberly Bartell, ERG. Re: 2014 TRI Pulp and Paper Dischargers - DCN 08474	Telephone and email conversation between Jerry Schwartz and Paul Wiegand, American Forest and Paper Association and National Council for Air and Stream Improvement, Inc. and Kimberly Bartell, Eastern Research Group, Inc. about 2014 TRI Pulp and Paper Dischargers.	Meeting Materials	Schwartz & Wiegand	02/24/2016	Schwartz, J. & Wiegand, P. 2016. Communication Between Jerry Schwartz and Paul Wiegand, AF&PA and NCASI and Kim Bartell, ERG. Re: 2014 TRI. (Feb).	Pulp, Paper, and Paperboard	39	No	No	08474
10.49	EPA-HQ-OW-2015-0665-0463	Development Document for Proposed Effluent Limitations Guidelines, New Source Performance Standards, and Pretreatment Standards for the Pulp, Paper and Paperboard and the Builders Paper and Board Mills Point Source Categories - DCN 08475	Development Document for Proposed Effluent Limitations Guidelines, New Source Performance Standards, and Pretreatment Standards for the Pulp, Paper and Paperboard and the Builders Paper and Board Mills Point Source Categories.	Publication; USEPA	U.S. EPA	12/01/1980	U.S. EPA. 1980. TDD for Proposed ELGs for the Pulp, Paper and Paperboard and the Builders Paper and Board Mills PSCs. Washington, D.C. (Dec).	Pulp, Paper, and Paperboard	660	No	No	08475

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10.49	EPA-HQ-OW-2015-0665-0464	Changes to the TRI List Of Toxic Chemicals - DCN 08476	Chemical deletions and modifications to the TRI list of toxic chemicals in 2015.	Publication; USEPA	U.S. EPA	12/01/2015	U.S. EPA. 2015. Changes To The TRI List Of Toxic Chemicals. Toxics Release Inventory Program. Washington, D.C. (December 1).	Pulp, Paper, and Paperboard	13	No	No	08476
10.49	EPA-HQ-OW-2015-0665-0465	Fluidized Bed Reactor Technology: Implementation and Operation for Industrial Contaminated Water Treatment - DCN 08477	Paper summarizes case studies demonstrating the efficacy of the fluidized bed reactor technology on various contaminated wastewater streams.	Publication; Copyrighted Materials	Webster, T., et al	01/01/2012	Webster, T. et al. 2012. Fluidized bed bioreactor technology: Implementation and operation for industrial contaminated water treatment. WEFTEC.	Pulp, Paper, and Paperboard	12	No	Yes	08477
10.49	EPA-HQ-OW-2015-0665-0466	Wisconsin Department of Natural Resources (WI DNR). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NPDES WI0037991 - Stora Enso North America, Wisconsin Rapids, WI - DCN 08478	NPDES Facility Permit and Fact Sheet for Stora Enso North America, Wisconsin Rapids, WI - WI0037991.	Permit, Registration	WI DNR	10/01/2010	WI DNR. 2010. NPDES Permit and Fact Sheet for Stora Enso North America, Wisconsin Rapids, WI - WI0037991. (October 1).	Pulp, Paper, and Paperboard	156	No	No	08478

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10.49	EPA-HQ-OW-2015-0665-0467	Wisconsin Department of Natural Resources (WI DNR). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NPDES WI0002810 - Packaging Corp of America, Tomahawk, WI - DCN 08479	NPDES Facility Permit and Fact Sheet for Packaging Corp of America, Tomahawk, WI - WI0002810.	Permit, Registration	WI DNR	04/01/2010	WI DNR. 2010. NPDES Permit and Fact Sheet for Packaging Corp of America, Tomahawk, WI - WI0002810. (April 1).	Pulp, Paper, and Paperboard	91	No	No	08479
10.49	EPA-HQ-OW-2015-0665-0468	Wisconsin Department of Natural Resources (WI DNR). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NPDES WI0003620 - Domtar, Point Edwards, WI - DCN 08480	NPDES Facility Permit and Fact Sheet for Domtar, Point Edwards, WI - WI0003620.	Permit, Registration	WI DNR	01/01/2013	WI DNR. 2013. NPDES Permit and Fact Sheet for Domtar, Point Edwards, WI - WI0003620. (January 1).	Pulp, Paper, and Paperboard	104	No	No	08480
10.49	EPA-HQ-OW-2015-0665-0469	Wisconsin Department of Natural Resources (WI DNR). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NPDES WI0003212 - Flambeau River Papers, Park Falls, WI - DCN 08481	NPDES Facility Permit and Fact Sheet for Flambeau River Papers, Park Falls, WI - WI0003212.	Permit, Registration	WI DNR	08/01/2015	WI DNR. 2015. NPDES Permit and Fact Sheet for Flambeau River Papers, Park Falls, WI - WI0003212. (August 1).	Pulp, Paper, and Paperboard	96	No	No	08481



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.49	EPA-HQ-OW-2015-0665-0470	Telephone and Email Communication Between Jake Zimmerman, Wisconsin DNR, and Kimberly Bartell, ERG. Re: Pulp and Paper Mill Facility Permitting Practices in Wisconsin - DCN 08482	Telephone and email conversation between Jake Zimmerman, Wisconsin DNR, and Kimberly Bartell, Eastern Research Group, Inc about Pulp and Paper Mill Permitting Practices in Wisconsin.	Meeting Materials	Zimmerman, J.	03/28/2016	Zimmerman, J. 2016. Communication Between Jake Zimmerman, Wisconsin DNR, and Kim Bartell, ERG. Re: Permitting Practices in Wisconsin. (March 28).	Pulp, Paper, and Paperboard	4	No	No	08482
10.5	EPA-HQ-OW-2015-0665-1025	Final 2016 Effluent Guidelines Program Plan – DCN 08317	Final 2016 Plan for the Industrial Effluent Guidelines Program.	Publication; USEPA	U.S. EPA	04/24/2018	U.S. EPA. 2018. Final 2016 Effluent Guidelines Program Plan		51	No	No	08317
10.5	EPA-HQ-OW-2015-0665-1056	Effluent Guidelines Planning Review Report Supporting the Final 2016 Effluent Guidelines Program Plan - DCN 08318	The report containing the analyses completed during the ELG review supporting the Final 2016 Plan.	Publication; USEPA	U.S. EPA	04/24/2018	U.S. EPA. 2018. ELG Planning Review Report Supporting the Final 2016 Plan		261	No	No	08318

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.5	EPA-HQ-OW-2015-0665-1115	Effluent Guidelines Planning Review Report Supporting the Final 2016 Effluent Guidelines Program Plan Appendices - DCN 08319	Appendices supporting the Effluent Guidelines Planning Review Report Supporting the Final 2016 Effluent Guidelines Program Plan.	Publication; USEPA	U.S. EPA	04/24/2018	U.S. EPA. 2018. Appendices supporting the ELG Planning RR Supporting the Final 2016 Plan.		46	No	No	08319
10.5	EPA-HQ-OW-2015-0665-0317	A Review of Battery Life-Cycle Analysis: State of Knowledge and Critical Needs - DCN 08320	A literature review and evaluation has been conducted on cradle-to-grave life-cycle inventory studies of lead-acid, nickel-cadmium, nickel-metal hydride, sodium-sulfur, and lithium-ion battery technologies.	Study	Argonne National Lab	10/01/2010	Argonne National Laboratory (ANL). 2010. A Review of Battery Life-Cycle Analysis: State of Knowledge and Critical Needs. E. S. Division. (Oct 1).	Battery Manufacturing	45	No	No	08320
10.5	EPA-HQ-OW-2015-0665-0318	BASF Catalysts. Nickel Metal-Hydride - DCN 08321	BASF offers licenses for its Ovonic Nickel Metal-Hydride (NiMH) technology. They hope to continue to develop state-of-the-art- technology	Fact/Data Sheet	BASF	08/10/2016	BASF. 2016. Catalysts. Nickel Metal- Hydride.	Battery Manufacturing	2	No	No	08321

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.5	EPA-HQ-OW-2015-0665-0319	U.S. Lithium-Ion Battery Makers Await Transportation Transformation. Battery Boom - DCN 08322	Publication discussing the future of advanced batteries.	Publication; Copyrighted Materials	Bomgardner, M.	02/06/2012	Bomgardner, Melody. 2012. U.S. Lithium-Ion Battery Makers Await Transportation Transformation. Battery Boom. (February 6). 90(6): 18-20.	Battery Manufacturing	9	No	Yes	08322
10.5	EPA-HQ-OW-2015-0665-0320	Evaluation of U.S. Economic Census Data for the Battery Manufacturing Industry - DCN 08323	Excel sheet detailing an evaluation of the U.S. Economic Census Data for the battery manufacturing NAICS codes.	Analysis	ERG	10/01/2016	ERG. 2016. Evaluation of U.S. Economic Census Data for the Battery Manufacturing Industry. Chantilly, VA. (October).	Battery Manufacturing	1	No	No	08323
10.5	EPA-HQ-OW-2015-0665-0321	Review of Battery Manufacturers Identified in DMR, TRI, and ECHO Databases - DCN 08324	Review of Battery Manufacturers Identified in DMR, TRI, and ECHO Databases for the ELG Planning Review Report Supporting the Final 2016 ELG Plan.	Analysis	ERG	08/01/2016	ERG. 2016. Review of Battery Manufacturers Identified in DMR, TRI, and ECHO Databases for the RR Supporting the Final 2016 Plan. (August).	Battery Manufacturing	1	No	No	08324

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10.5	EPA-HQ-OW-2015-0665-0509	Summary of Information Gathered at the 2016 SEMICON West Conference and Intersolar North America, San Francisco, CA - DCN 08325	Memorandum from Kim Bartell, ERG, to Jezebele Alicea and Emily Trentacoste, EPA discussing the information gathered at the 2016 SEMICON West Conference and Intersolar North America, San Francisco CA.	Memorandum	ERG	08/03/2016	ERG. 2016. Memorandum from Kim Bartell, ERG, to Jezebele Alicea and Emily Trentacoste, EPA, Re: SEMICON West Conference and Intersolar. (August 3).	Battery Manufacturing	3	No	No	08325
10.5	EPA-HQ-OW-2015-0665-0322	Charging Forward: Fuel Efficiency Trends Will Increase Demand from Automakers - DCN 08326	IBISWorld Industry Report 33591: Charging Forward: Fuel Efficiency Trends Will Increase Demand from Automakers	Publication; Copyrighted Materials	IBISWorld	02/01/2016	IBISWorld. 2016. Charging Forward: Fuel Efficiency Trends Will Increase Demand from Automakers. IBISWorld Industry Report 33591. (February).	Battery Manufacturing	39	No	Yes	08326
10.5	EPA-HQ-OW-2015-0665-0323	NPDES Permit for C&D Technologies, Attica, IN (IN0049093) - DCN 08327	NPDES Permit for C&D Technologies, Attica, IN (IN0049093) issued by the Indiana Department of Environmental Management.	Permit, Registration	IDEM	01/17/2014	IDEM. 2014. Indiana Department of Environmental Management. NPDES Permit for C&D Technologies, Attica, IN (IN0049093). (January 17).	Battery Manufacturing	75	No	No	08327

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.5	EPA-HQ-OW-2015-0665-0324	NPDES Permit and Fact Sheet for Exide Technologies, Manchester, IA (IA0063533) - DCN 08328	NPDES Permit and Fact Sheet for Exide Technologies, Manchester, IA (IA0063533) issued by the Iowa Department of Natural Resources	Permit, Registration	IA DNR	10/01/2014	IDNR. 2014. Iowa Department of Natural Resources. NPDES Permit and Fact Sheet for Exide Technologies, Manchester, IA (IA0063533). (October 1).	Battery Manufacturing	20	No	No	08328
10.5	EPA-HQ-OW-2015-0665-0325	Battery Manufacturing at Tesla Motors -Gigafactory in Sparks, NV - DCN 08329	Facility Data Review and Calculations for Point Source Category – 420 – Iron and Steel Manufacturing for the ELG Planning Review Report Supporting the Final 2016 ELG Plan.	Meeting materials	Jackson, J.	06/09/2016	Jackson, J. 2016. Telephone Communication Between Jeff Jackson, Tesla, and Liz Gentile, ERG, Re: Battery Manufacturing at Tesla Motors. (June 9).	Battery Manufacturing	4	No	No	08329
10.5	EPA-HQ-OW-2015-0665-0326	Scientific Reports: Solvent-Free Manufacturing of Electrodes for Lithium-ion Batteries - DCN 08330	Journal article describing electrochemical tests show that the new electrodes outperform conventional slurry processed electrodes, which is due to different binder distribution.	Publication	Ludwig, B., et al.	03/17/2016	Ludwig, B., et al. 2016. Solvent-Free Manufacturing of Electrodes for Lithium-ion Batteries. Scientific Reports. (March 17). 6(23150).	Battery Manufacturing	10	No	No	08330

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10.5	EPA-HQ-OW-2015-0665-0327	Overview of the Design, Development, and Application of Nickel-Hydrogen Batteries - DCN 08331	This document provides an overview of the design, development, and application of nickel-hydrogen (Ni-H2) battery technology for aerospace applications. It complements and updates the information presented in NASA RP-1314, "NASA Handbook for Nickel-Hydrogen Batteries," published in 1993.	Publication	Thaller & Zimmerman	06/01/2003	Thaller, L. H., & Zimmerman, A. H. 2003. Overview of the Design, Development, and Application of Nickel-Hydrogen Batteries.	Battery Manufacturing	44	No	No	08331
10.5	EPA-HQ-OW-2015-0665-0328	U.S. Census FAQ: What is the difference between an establishment and firm? What about companies? - DCN 08332	U.S. Economic Census Beaureau Frequently Asked Questions: What is the difference between an establishment and firm? What about companies?"	Fact/Data Sheet	U.S. Economic Census.	07/14/2016	U.S. Economic Census. 2016. "FAQ: What is the difference between an establishment and firm? What about companies?" Accessed: July 14, 2016.	Battery Manufacturing	2	No	No	08332
10.5	EPA-HQ-OW-2015-0665-0329	Battery cell production begins at the gigafactory - DCN 08333	Tesla and Panasonic begin mass production of lithium-ion battery cells, which will be used in Tesla's energy storage products and Model 3.	Press Release	Tesla Motors	01/04/2017	Tesla Motors. 2017. Tesla Energy. Battery Cell Production Begins at the Gigafactory. Accessed: February 17, 2017.	Battery Manufacturing	2	No	No	08333

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11.3	EPA-HQ-OW-2015-0665-0511	Telephone and Email Communication Between Jory Becker, KY DEP, and Sara Bossenbroek, ERG. Re: Distillery and Soft Drink Manufacturing Facilities in Kentucky - DCN 08522	Telephone and email conversation between Jory Becker, Kentucky DEP, and Sara Bossenbroek, Eastern Research Group, Inc. about Distillery and Soft Drink Manufacturing Facilities in Kentucky.	Meeting Materials	Becker, J.	03/30/2017	Becker, J. 2017. Communication Between Jory Becker, KY DEP, and Sara Bossenbroek, ERG. Re: Distillery and Soft Drink Facilities. (March 30).	Miscellaneous Foods and Beverages	9	No	No	08522
11.3	EPA-HQ-OW-2015-0665-0512	Telephone and Email Communication Between Reuel Anderson, Nebraska Department of Environmental Quality, and Elizabeth Gentile, ERG. Re: Wis Pak 2015 DMR Data - DCN 08525	Telephone and email conversation between Reuel Anderson, Nebraska Department of Environmental Quality, and Elizabeth Gentile, Eastern Research Group, Inc., Re: Wis Pak 2015 DMR Data	Meeting Materials	Anderson, R.	03/27/2017	Anderson. 2017. Communication Between Reuel Anderson, NE DEQ, and Elizabeth Gentile, ERG, Re: Wis Pak 2015 DMR Data. (March 27).		3	No	No	08525
11.3	EPA-HQ-OW-2015-0665-0513	Telephone and Email Communication Between Don Carlson, Kansas Department of Health and Environment, and Sara Bossenbroek, ERG. Re: Distilleries in Kansas - DCN 08526	Telephone and email conversation between Don Carlson, Kansas Department of Health and Environment, and Sara Bossenbroek, Eastern Research Group, Inc., Re: Distilleries in Kansas	Meeting Materials	Carlson, D.	04/03/2017	Carlson, D. 2017. Communication Between Don Carlson, KS DHE, and Sara Bossenbroek, ERG. Re: Distilleries in Kansas. (April 3).	Miscellaneous Foods and Beverages	2	No	No	08526

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11.3	EPA-HQ-OW-2015-0665-0514	Miscellaneous Food and Beverage Review—Revised SIC and NAICS Codes - DCN 08527	Miscellaneous Food and Beverage Review—Revised SIC and NAICS Codes	Data	ERG	12/20/2016	ERG. 2016. Eastern Research Group, Inc. Miscellaneous Food and Beverage Review—Revised SIC and NAICS Codes. (December 21).	Miscellaneous Foods and Beverages	0	No	No	08527
11.3	EPA-HQ-OW-2015-0665-0515	Kansas Department of Health & Environment (KS DHE). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NPDES KS0100269 - MGP Ingredients, Inc. Atchison, KS - DCN 08528	NPDES Facility Permit and Fact Sheet for MGP Ingredients, Inc. (Midwest Grain Products, Inc.) Atchison, KS - KS0100269	Permit, Registration	KS DHE	07/19/2011	KS DHE. 2011. NPDES Permit and Fact Sheet: MGP Ingredients, Inc., Atchison, KS, KS0100269. (July 19).	Miscellaneous Foods and Beverages	18	No	No	08528
11.3	EPA-HQ-OW-2015-0665-0516	Kentucky Department of Environmental Protection (KY DEP). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NPDES KY0001252 - Jim Beam Brands Company. Frankfort, KY - DCN 08529	NPDES Facility Permit and Fact Sheet for Jim Beam Brands Company. Frankfort, KY - KY0001252	Permit, Registration	KY DEP	08/01/2013	KY DEP. 2013. NPDES Permit and Fact Sheet: Jim Beam Brands Company, Frankfort, KY, KY0001252. (August 1).	Miscellaneous Foods and Beverages	79	No	No	08529



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
11.3	EPA-HQ-OW-2015-0665-0517	Kentucky Department of Environmental Protection (KY DEP). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NPDES KYR000000 - Pepsi Cola Bottling Company. Corbin, KY - DCN 08530	NPDES Facility Permit and Fact Sheet for Pepsi Cola Bottling Company. Corbin, KY - KYR000000	Permit, Registration	KY DEP	06/01/2013	KY DEP. 2013. NPDES Permit, Fact Sheet, and Coverage Letter: Pepsi Cola Bottling Company, Corbin, KY, KYR000000. (June 1).	Miscellaneous Foods and Beverages	58	No	No	08530
11.3	EPA-HQ-OW-2015-0665-0518	Kentucky Department of Environmental Protection (KY DEP). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NPDES KY0001643 - Wild Turkey Distillery. Lawrenceburg, KY - DCN 08531	NPDES Facility Permit and Fact Sheet for Wild Turkey Distillery. Lawrenceburg, KY - KY0001643	Permit, Registration	KY DEP	07/01/2015	KY DEP. 2015. NPDES Permit and Fact Sheet: Campari America, Lawrenceburg, KY, KY0001643. (July 1).	Miscellaneous Foods and Beverages	53	No	No	08531
11.3	EPA-HQ-OW-2015-0665-0519	Kentucky Department of Environmental Protection (KY DEP). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NPDES KY0001031 - The Glenmore Distillery. Owensboro, KY - DCN 08532	NPDES Facility Permit and Fact Sheet for The Glenmore Distillery. Owensboro, KY - KY0001031	Permit, Registration	KY DEP	04/01/2016	KY DEP. 2016. NPDES Permit: The Glenmore Distillery, Owensboro, KY, KY0001031. (April 1).	Miscellaneous Foods and Beverages	46	No	No	08532

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11.3	EPA-HQ-OW-2015-0665-0520	Kentucky Department of Environmental Protection (KY DEP). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NPDES KY0102261 - The Woodford Reserve Distillery. Versailles, KY - DCN 08533	NPDES Facility Permit and Fact Sheet for The Woodford Reserve Distillery. Versailles, KY - KY0102261	Permit, Registration	KY DEP	06/01/2013	KY DEP. 2016. NPDES Permit, Fact Sheet, and Coverage Letter: Woodford Reserve Distillery, Versailles, KY, KY0102261. (June 1).	Miscellaneous Foods and Beverages	75	No	No	08533
11.3	EPA-HQ-OW-2015-0665-0521	Telephone and Email Communication Between Murray Lantner, EPA Region 2, and Elizabeth Gentile, ERG. Re: Distillery Discharges in the Virgin Islands - DCN 08534	Telephone and email conversation between Murray Lantner, EPA Region 2, and Elizabeth Gentile, Eastern Research Group, Inc., Re: Distillery Discharges in the Virgin Islands.	Meeting Materials	Lantner, M.	03/31/2017	Lantner, M. 2017. Communication Between Murray Lantner, EPA Region 2, and Elizabeth Gentile, ERG. Re: Distillery Discharges in the Virgin Islands.	Miscellaneous Foods and Beverages	4	No	No	08534
11.3	EPA-HQ-OW-2015-0665-0522	Telephone Communication Between Darin LeCrone, Illinois EPA and Elizabeth Gentile, ERG. Re: NPDES Permits for Distilleries in Illinois. (March 31) - DCN 08535	Telephone conversation between Darin LeCrone, Illinois EPA and Elizabeth Gentile, Eastern Research Group, Inc., Re: NPDES Permits for Distilleries in Illinois.	Meeting Materials	LeCrone, D.	03/31/2017	LeCrone, D. 2017. Communication Between Darin LeCrone, IL EPA and Elizabeth Gentile, ERG. Re: NPDES Permits for Distilleries in IL. (March 31).	Miscellaneous Foods and Beverages	1	No	No	08535

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
11.3	EPA-HQ-OW-2015-0665-0523	Nebraska Department of Water Quality (NE DEQ). National Pollutant Discharge Elimination System Facility Permit and Fact Sheet for NPDES NE0131059 - Wis Pak of Norfolk, Inc. Norfolk, NE - DCN 08536	NPDES Facility Permit and Fact Sheet for Wis Pak of Norfolk, Inc. Norfolk, NE - NE0131059	Permit, Registration	NE DEQ	09/02/2015	NE DEQ. 2015. NPDES Permit and Fact Sheet: Wis Pak of Norfolk, Inc., NE0131059. (September 2).	Miscellaneous Foods and Beverages	36	No	No	08536
11.3	EPA-HQ-OW-2015-0665-0524	Telephone Communication Between Eric Nygaard, Ohio EPA, and Elizabeth Gentile, ERG. Re: G&J Pepsi Cola Bottling Co – 2015 DMR Data - DCN 08537	Telephone conversation between Eric Nygaard, Ohio EPA, and Elizabeth Gentile, Eastern Research Group, Inc., Re: G&J Pepsi Cola Bottling Co – 2015 DMR Data	Meeting Materials	Nygaard, E.	03/27/2017	Nygaard, E. 2017. Communication Between Eric Nygaard, OH EPA, and Elizabeth Gentile, ERG. Re: G&J Pepsi Cola Bottling Co. (March 27).	Miscellaneous Foods and Beverages	1	No	No	08537
11.3	EPA-HQ-OW-2015-0665-0525	U.S. Economic Census Data for NAICS 312111 and NAICS 312140 - DCN 08538	U.S. Census. 2012. U.S. Economic Census Data for NAICS 312111 and NAICS 312140. Available online at: <a href="https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t#">https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t#</a>	Data	U.S. Census	07/04/1905	2012. U.S. Census Data for NAICS 312111 and NAICS 312140.	Miscellaneous Foods and Beverages	4	No	No	08538

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
11.3	EPA-HQ-OW-2015-0665-0526	U.S. Virgin Islands Department of Planning and Natural Resources (V.I. DPNR). Territorial Pollutant Discharge Elimination System Facility Permit and Fact Sheet for TPDES VI0020052 - Cruzan VIRIL Ltd. Frederiksted, VI - DCN 08539	TPDES Facility Permit and Fact Sheet for Cruzan VIRIL Ltd. Frederiksted, VI - VI0020052	Permit, Registration	V.I. DPNR	07/25/2016	U.S. V.I. DPNR. 2016. TPDES Permit and Fact Sheet: Cruzan VIRIL Ltd. (Cruzan Rum Distillery), Frederiksted, St. Croix, VI0020052.	Miscellaneous Foods and Beverages	97	No	No	08539
11.3	EPA-HQ-OW-2015-0665-0527	Telephone and Email Communication Between Gil Vazquez, California State Water Resources Control Board, and Sara Bossenbroek, ERG. Re: Distillery and Soft Drink Manufacturing Facilities in California - DCN 08540	Telephone and email conversation between Gil Vazquez, California State Water Resources Control Board, and Sara Bossenbroek, Eastern Research Group, Inc., Re: Distillery and Soft Drink Manufacturing Facilities in California.	Meeting Materials	Vazquez, G.	03/28/2017	2017. Communication Between Gil Vazquez, CA WRCB, and Sara Bossenbroek, ERG. Re: Distillery and Soft Drink Facilities in CA.	Miscellaneous Foods and Beverages	3	No	No	08540
11.6	EPA-HQ-OW-2015-0665-0356	Chemical mechanical planarization of electronic materials - DCN 08360	In the modern semiconductor manufacturing processes, chemical mechanical planarization (CMP) has attained important processing step because of its ability to provide global planarization. CMP is the planarization technique which is used for the removal of excess material, as left over from the previous processing steps. In addition, CMP offers a uniform surface that is essential for subsequent processing steps, especially for the high resolution photolithography processes.	Publication; Copyrighted Materials	Atiquzzaman, F.	10/17/2012	Atiquzzaman, F. (2012). Chemical mechanical planarization of electronic materials. University of Florida Scholar Commons.	Nanomaterials	87	No	Yes	08360

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11.6	EPA-HQ-OW-2015-0665-0357	Detection, characterization, and abundance of engineered nanoparticles in complex waters by hyperspectral imagery with enhanced darkfield microscopy - DCN 08361	Novel methodology based on hyperspectral imagery with enhanced Darkfield microscopy for detection, characterization, and analysis of engineered nanoparticles in both ultrapure water and in complex waters, such as simulated-wetland ecosystem water and wastewater.	Publication; Copyrighted Materials	Badireddy, A.	08/18/2012	Badireddy, A., et al. (2012). Detection, characterization, and abundance of engineered nanoparticles. ES&T. 46(18): 10081-10088.	Nanomaterials	8	No	Yes	08361
11.6	EPA-HQ-OW-2015-0665-0358	Applications of nanotechnology in wastewater treatment – A review - DCN 08362	In this article, the application of various nanomaterials such as metal nanoparticles, metal oxides, carbon compounds, zeolite, filtration membranes, etc., in the field of wastewater treatment is discussed.	Publication; Copyrighted Materials	Bora, T., & Dutta, J.	02/01/2014	Bora, T., & Dutta, J. (2014). Applications of nanotechnology in wastewater treatment. Journal of Nanoscience and Nanotechnologies. 14(1): 613-626.	Nanomaterials	15	No	Yes	08362
11.6	EPA-HQ-OW-2015-0665-0359	Quantifying Exposure to Engineered Nanomaterials (QEEN) from Manufactured Products: Addressing Environmental, Health, and Safety Implications - DCN 08363	NNI workshop proceedings to inform long-range planning efforts for the NNI and its EHS Research Strategy. Sponsored by the Consumer Product Safety Commission in collaboration with the NNI.	Meeting Materials	CPSC	07/07/2015	CPSC. (2016). U.S. Consumer Product Safety Commission. Addressing Environmental, Health, and Safety Implications. Arlington, VA. (July 7-8).	Nanomaterials	110	No	No	08363

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11.6	EPA-HQ-OW-2015-0665-0360	Insights into the effect of mixed engineered nanoparticles on activated sludge performance - DCN 08364	In this study, the effects, fate and transport of engineered nanoparticles (ENPs) in wastewater treatment plants (WWTP) were investigated using three parallel pilot WWTPs operated under identical conditions. Competitive growth advantage of thenano-tolerant species influenced the removal processes and unlike other xenobiotic compounds, ENPs can hasten the natural selection of microbial species in activated sludge.	Publication; Copyrighted Materials	Eduok, S., et al.	07/13/2015	Eduok, S., et al. (2015). Insights into the effect of mixed ENMs on activated sludge performance. FEMS Microbiology Ecology. 91(7). (July).	Nanomaterials	9	No	Yes	08364
11.6	EPA-HQ-OW-2015-0665-0361	Framework and tools for risk assessment of manufactured nanomaterials - DCN 08365	Today we face challenges to assess environmental, health, and safety (EHS) risks, which emerge from uncertainties around the interactions of manufactured nanomaterials (MNs) with humans and the environment. In order to reduce these uncertainties, it is necessary to generate sound scientific data on hazard and exposure by means of relevant frameworks and tools. The aim of this paper was to review and critically analyze these approaches against a set of relevant criteria.	Publication; Copyrighted Materials	Hristozov, D., et al.	07/20/2016	Hristozov, D., et al. (2016). Framework and tools for risk assessment of manufactured nanomaterials. Environmental International. (Aug).	Nanomaterials	19	No	Yes	08365
11.6	EPA-HQ-OW-2015-0665-0362	Nanomaterials in biosolids inhabit nodulation, shift microbial community composition, and result in increased metal uptake relative to bulk/dissolved metals - DCN 08366	This report examines the effects of amending soil with biosolids produced from a pilot-scale wastewater treatment plant containing a mixture of metal-based engineered nanomaterials (ENMs) on the growth of <i>Medicago truncatula</i> , its symbiosis with <i>Sinorhizobium meliloti</i> , and on soil microbial community structure.	Publication; Copyrighted Materials	Judy, J. D., et al.	06/10/2015	Judy, J. D., et al. (2015). Nanomaterials result in increased metal uptake relative to bulk/dissolved metals. Environmental Science & Technology.	Nanomaterials	8	No	Yes	08366

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
11.6	EPA-HQ-OW-2015-0665-0363	Fate and transformation of silver nanoparticles in urban wastewater systems - DCN 08367	Discharge of silver nanoparticles (Ag-NP) from textiles and cosmetics, today's major application areas for metallic Ag-NP, into wastewater is inevitable. Transformation and removal processes in sewers and wastewater treatment plants (WWTP) will determine the impact of Ag-NP on aquatic and terrestrial environments, via the effluents of the WWTP and via the use of digested sludge as fertilizer. The authors conducted experiments addressing the behavior of Ag-NP in sewers and in WWTP.	Publication; Copyrighted Materials	Kaegi, R., et al.	03/26/2013	Kaegi, R., et al. (2013). Fate and transformation of silver nanoparticles in urban wastewater systems. Water Research. 47(12): 3866-3877. (Aug).	Nanomaterials	12	No	Yes	08367
11.6	EPA-HQ-OW-2015-0665-0364	Predicted releases of engineered nanomaterials: From global to regional to local - DCN 08368	A key question for industry, regulators, toxicologists, and risk assessors working with nanomaterials is what relevant environmental engineered nanomaterial (ENM) concentrations should be considered. Answering this question requires ENM material flow estimates at the local level. Using a life-cycle approach, global ENM production and application data were used to estimate releases at global, regional, national, and local levels.	Publication; Copyrighted Materials	Keller, A. & Lazareva, A.	10/14/2013	Keller, A., & Lazareva, A. (2014). Predicted releases of engineered nanomaterials: From global to regional to local. ES&T Letters. 1(1): 65-70.	Nanomaterials	6	No	Yes	08368
11.6	EPA-HQ-OW-2015-0665-0365	Application of recycled zero-valent iron nanoparticle to the treatment of wastewater containing nitrobenzene - DCN 08369	Zero-valent iron (ZVI) was synthesized using iron oxide, a byproduct of pickling line at a steel work. When combined with a subsequent biological process, the synthesized ZVI will be able to decompose nitrobenzene (NB) in wastewater effectively.	Publication; Copyrighted Materials	Lee, H., et al.	11/16/2015	Lee, et al. (2015). Application of recycled zero-valent iron nanoparticle to the treatment of ww containing nitrobenzene. Journal of Nanomaterials.	Nanomaterials	9	No	Yes	08369

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11.6	EPA-HQ-OW-2015-0665-0366	An overview of nanomaterials for water and wastewater treatment - DCN 08370	In this paper, the most extensively studied nanomaterials, zero-valent metal nanoparticles (Ag, Fe, and Zn), metal oxide nanoparticles (TiO <sub>2</sub> , ZnO, and iron oxides), carbon nanotubes (CNTs), and nanocomposites are discussed and highlighted in detail. Also, future aspects of nanomaterials in water and wastewater treatment are discussed.	Publication; Copyrighted Materials	Lu, H., et al.	06/23/2016	Lu, H., et al. (2016). An overview of nanomaterials for water and wastewater treatment. <i>Advances in Materials Science and Engineering</i> . (June).	Nanomaterials	11	No	Yes	08370
11.6	EPA-HQ-OW-2015-0665-0367	National Nanotechnology Initiative Environmental, Health, and Safety Research Strategy - DCN 08371	This document is the NNI's Environmental, Health, and Safety (EHS) Research Strategy. The NNI EHS Research Strategy aims to ensure the responsible development of nanotechnology by providing guidance to the Federal agencies that produce the scientific information for risk management, regulatory decision making, product use, research planning, and public outreach. This document describes the NNI's EHS vision and mission, the state of the science, and the research needed to achieve the vision.	Publication; Other Governmental	NNI	10/01/2011	NNI. (2011). NNI Environmental Health and Safety Plan. National Science and Technology, Council Committee of Technology. (Oct).	Nanomaterials	136	No	No	08371
11.6	EPA-HQ-OW-2015-0665-0368	National Nanotechnology Initiative Strategic Plan - DCN 08372	This document is the strategic plan for the NNI. It describes the NNI vision and goals and the strategies by which these goals are to be achieved. The plan includes a description of the NNI investment strategy and the program component areas called for by the 21st Century Research and Development Act of 2003, and it also identifies specific objectives toward collectively achieving the NNI vision.	Publication; Other Governmental	NNI	10/01/2016	NNI. (2016). NNI Strategic Plan. National Science and Technology, Council Committee of Technology. (Oct).	Nanomaterials	68	No	No	08372



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
11.6	EPA-HQ-OW-2015-0665-0369	Current limitations and challenges in nanowaste detection, characterization and monitoring - DCN 08373	This paper summarizes challenges in nanowaste characterization and appropriate analytical techniques which can be applied to nanowaste analysis. Recent case studies focusing on the characterization of ENMs in waste streams are discussed.	Publication; Copyrighted Materials	Part, F., et al.	06/24/2015	Part, F. (2015). Current limitations and challenges in nanowaste detection, characterization and monitoring. Waste Management. 43: 407-420. (Sept).	Nanomaterials	14	No	Yes	08373
11.6	EPA-HQ-OW-2015-0665-0370	Consumer Products Inventory - DCN 08374	Consumer Products Inventory for products utilizing nanomaterials in manufacturing processes.	Study	PEN	01/01/2016	Project on Emerging Nanotechnologies. (2016). Consumer Products Inventory. Available online: <a href="http://www.nanotechproject.org/cpi">http://www.nanotechproject.org/cpi</a> . Accessed: Dec 2016.	Nanomaterials	12	No	No	08374
11.6	EPA-HQ-OW-2015-0665-0371	SEM analysis of particle size during conventional treatment of CMP process wastewater - DCN 08375	This study investigates the fate of ENMs used in chemical mechanical planarization (CMP), a polishing process repeatedly utilized in semiconductor manufacturing. Nanoparticle sizing data compared between sampling points, including the final sampling point before discharge from the facility, suggested that nanoparticles could be released to the municipal waste stream from industrial sources.	Publication; Copyrighted Materials	Roth, G. A., et al.	11/28/2014	Roth, G. A. (2015). SEM analysis of particle size during conventional treatment of CMP process ww. Science of the Total Environment. 508: 1-6. (Mar).	Nanomaterials	6	No	Yes	08375

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
11.6	EPA-HQ-OW-2015-0665-0372	The current world of nanomaterial characterization: Discussion of analytical instruments for nanomaterial characterization - DCN 08376	This article addresses the nine most common nanomaterial characteristics and nearly 35 different analytical techniques commercially available to measure these nine characteristics. This article discusses the complexity of the nanotechnology market and the challenges the instrument manufacturers face.	Publication; Copyrighted Materials	Salamon, A.	01/24/2013	Salamon. (2013). The current world of nanomaterial characterization: Discussion of analytical instrument. Environmental Engineering Science. 30(3).	Nanomaterials	8	No	Yes	08376
11.6	EPA-HQ-OW-2015-0665-0373	Nanomaterials in the aquatic environment: A European Union–United States perspective on the status of ecotoxicity testing, research priorities, and challenges ahead - DCN 08377	Based on work within the Ecotoxicology Community of Research (2012–2015), the article provides an overview of the state of the art of nanomaterials (NMs) in the aquatic environment by addressing different research questions, with a focus on ecotoxicological test systems and the challenges faced when assessing NM hazards (e.g., uptake routes, bioaccumulation, toxicity, test protocols, and model organisms).	Publication; Copyrighted Materials	Selck, H., et al.	05/01/2016	Selck, et al. (2016). Nanomaterials in the aquatic environment: A EU–US perspective. Environmental Toxicology and Chemistry. 35(5): 1055-1067. (May).	Nanomaterials	13	No	Yes	08377
11.6	EPA-HQ-OW-2015-0665-0374	Comprehensive probabilistic modelling of environmental emissions of engineered nanomaterials - DCN 08378	Authors calculate the concentrations of five ENMs in environmental and technical compartments using probabilistic material-flow modelling. We apply the newest data on ENM production volumes, their allocation to and subsequent release from different product categories, and their flows into and within those compartments. Further, we compare newly predicted ENM concentrations to estimates from 2009 and to corresponding measured concentrations of their conventional materials, e.g. TiO2, Zn and Ag.	Publication; Copyrighted Materials	Sun, T. Y., et al.	10/04/2013	Sun, T. Y., et al. (2014). Comprehensive probabilistic modelling of environmental emissions of ENMs. Environmental Pollution. 185: 69-76. (February).	Nanomaterials	8	No	Yes	08378

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11.6	EPA-HQ-OW-2015-0665-0375	Schedule for the 2016 TechConnect World Innovation Conference and Expo in Washington, D.C. - DCN 08379	Technical sessions schedule for TechConnect 2016	Meeting Materials	TechConnect	05/22/2016	TechConnect. (2016). Paper presented at or proceedings from the TechConnect World Innovation Conference and Expo. Washington, D.C. (May 22-26).	Nanomaterials	8	No	No	08379
11.6	EPA-HQ-OW-2015-0665-0376	Analysis of engineered nanomaterials in complex matrices (environment and biota): General considerations and conceptual case studies - DCN 08380	Discusses pressing research needs related to nanomaterials: the development of techniques for extraction, cleanup, separation, and sample storage that introduce minimal artifacts to increase the speed, sensitivity, and specificity of analytical techniques, as well as the development of techniques that can differentiate between abundant, naturally occurring particles, and manufactured nanoparticles.	Publication; Copyrighted Materials	von der Kammer, F, et al	06/29/2011	von der Kammer, F., et al. (2012). Analysis of ENMs in complex matrices. Environmental Toxicology and Chemistry. 31: 32-49. (Jan).	Nanomaterials	18	No	Yes	08380
11.6	EPA-HQ-OW-2015-0665-0377	Long-term effects of titanium dioxide nanoparticles on nitrogen and phosphorus removal from wastewater and bacterial community shift in activated sludge - DCN 08381	This study evaluated the influences of TiO2 nanoparticles on biological nutrient removal in the anaerobic-low dissolved oxygen (0.15 0.50 mg/L) sequencing batch reactor.	Publication; Copyrighted Materials	Zheng, X., et al	07/22/2011	Zheng, X. (2011). Long-term effects of titanium dioxide nanoparticles on nitrogen and phosphorus removal. ES&T. 45(17): 7284-7290.	Nanomaterials	7	No	Yes	08381

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
11.6	EPA-HQ-OW-2015-0665-0378	Comparison of Ceria Nanoparticle Concentrations in Effluent from Chemical Mechanical Polishing of Silicon Dioxide - DCN 08382	This paper measures and compares the effluent from the chemical mechanical polishing (CMP) of silicon dioxide using ceria slurry and ceria fixed abrasive.	Publication; Copyrighted Materials	Zazerra, L., et al	10/15/2014	Zazerra, L., et al. 2014. Comparison of Ceria Nanoparticle Concs in Effluent from CMP of Silicon Dioxide. ES&T, 48(22), 13427-13433.	Nanomaterials	7	No	Yes	08382
12.2	EPA-HQ-OW-2015-0665-0379	Export of Industrial Wastewater Treatment Technology (IWTT) Database Tables - DCN 08383	Tables exported for the section in the ELG Planning Review Report Supporting the Final 2016 ELG Plan on the Industrial Wastewater Treatment Technology Database.	Data	ERG	09/01/2016	ERG. (2016). Eastern Research Group,, Inc. Export of Industrial Wastewater Treatment Technology (IWTT) database tables.		0	No	No	08383
6.0		User Guide to the Docket for the Final 2016 Effluent Guidelines Program Plan - DCN 08544	Docket user guide explaining how to navigate the docket for supporting materials referenced in the Final 2016 Plan.	Publication USEPA	U.S. EPA	04/24/2018	U.S. EPA. 2018. User Guide to the Docket for the Final 2016 Effluent Guidelines Program Plan. (April).		17	No	No	08544

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
7.13	EPA-HQ-OW-2015-0665-1057	Response to Comments for the Preliminary 2016 Effluent Guidelines Program Plan - DCN 08521	This document contains EPA's responses to the public comments received on the Preliminary 2016 Plan. The Preliminary 2016 Plan, which EPA is required to develop by Section 304(m) of the CWA, describes the current status of EPA's planning for the ELG program, presents the results of EPA's review of the ELGs it has already promulgated for industrial categories, and identifies industrial categories that EPA expects to investigate further for the possible development or revision of ELGs.	Publication USEPA	U.S. EPA	04/01/2018	U.S. EPA. 2016. Preliminary Comment Reponse Document (April).		109	No	No	08521
9.1	EPA-HQ-OW-2015-0665-0401	Toxic Chemical Release Inventory Reporting Forms and Instructions - DCN 08405	TRI reporting instructions for reporting year 2014.	Publication; USEPA	U.S. EPA	12/01/2015	U.S. EPA. (2014). Toxic Chemical Release Inventory Reporting Forms and Instructions. Washington, D.C. (December). EPA 260-R-15-001.		215	No	No	08405
9.1	EPA-HQ-OW-2015-0665-0402	DMR Parameter and TRI Chemical Toxic Weighting Factors - DCN 08406	Table containing September 2016 DMR and TRI TWFs.	Data	U.S. EPA		U.S. EPA. (2016). DMR parameter and TRI chemical Toxic Weighting Factors. Washington, D.C.		0	No	No	08406

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
9.1	EPA-HQ-OW-2015-0665-1092	2014 Toxics Release Inventory (TRI) Water Release Database - TRILTOOutput2014_v1 - DCN 08409	2014 TRI water release data compiled in an access database, for the ELG Planning Review Report Supporting the Final 2016 ELG Plan.	Data	ERG	04/24/2018	DMR Loading Tool Output - 2014 TRI Water Release Data		0	No	No	08409
9.1	EPA-HQ-OW-2015-0665-0403	Toxics Release Inventory Data Quality - DCN 08411	Steps taken to promote data quality for TRI include analyzing data for potential errors, contacting TRI facilities concerning potentially inaccurate submissions, providing guidance on reporting requirements and, as necessary, taking enforcement actions against facilities that fail to comply with TRI requirements.	Fact/Data Sheet	U.S. EPA		U.S. EPA. (2016). Toxics Release Inventory data quality. Available at: <a href="https://www.epa.gov/toxics-release-inventory-tri-program/tri-data-quality">https://www.epa.gov/toxics-release-inventory-tri-program/tri-data-quality</a> .		3	No	No	08411
9.1	EPA-HQ-OW-2015-0665-0409	2014 TRI Chemical List - DCN 08418	Table containing 2014 Toxic Release Inventory chemical list.	Fact/Data Sheet	U.S. EPA	06/01/2015	U.S. EPA. 2015. 2014 TRI Chemical List. Toxics Release Inventory Program. Washington, D.C. (June).		0	No	No	08418

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
9.1	EPA-HQ-OW-2015-0665-0410	Is My Facility's Six-Digit NAICS Code a TRI-Covered Industry? - DCN 08419	Instructions to determine if a facility's six-digit primary NAICS code is covered by the TRI program.	Fact/Data Sheet	U.S. EPA	02/03/2015	U.S. EPA. 2015. Is My Facility's Six-Digit NAICS Code a TRI-Covered Industry? Toxics Release Inventory Program. Washington, D.C. (February 3).		8	No	No	08419
9.1	EPA-HQ-OW-2015-0665-1095	2015 Toxics Release Inventory (TRI) Water Release Database for F&B -TRILTOutput2015_F&B_v1 - DCN 08524	2015 TRI water release data compiled in an access database, supporting the miscellaneous food and beverage review.	Data	ERG	12/31/2015	DMR Loading Tool Output - 2015 TRI Water Release Data	Miscellaneous Foods and Beverages	0	No	No	08524
9.2	EPA-HQ-OW-2015-0665-1090	2014 Discharge Monitoring Report (DMR) Concentration Output Database - DMRLTConcOutput2014_v1 - DCN 08407	2014 DMR concentration data compiled in an access database, for the ELG Planning Review Report Supporting the Final 2016 ELG Plan.	Data	ERG	04/24/2018	DMR Loading Tool Output - 2014 DMR Concentration Data		0	No	No	08407

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
9.2	EPA-HQ-OW-2015-0665-1091	2014 Discharge Monitoring Report (DMR) Database - DMRLTOutput2014_v1 - DCN 08408	2014 DMR loadings data compiled in an access database, for the ELG Planning Review Report Supporting the Final 2016 ELG Plan.	Data	ERG	04/24/2018	DMR Loading Tool Output - 2014 DMR Loadings Data		0	No	No	08408
9.2	EPA-HQ-OW-2015-0665-0510	Final NPDES Electronic Reporting Rule - DCN 08520	This final rule is designed to save authorized state, tribe, or territorial NPDES programs considerable resources, make reporting easier for NPDES-regulated entities, streamline permit renewals, ensure full exchange of basic NPDES permit data between states and EPA, improve environmental decision-making, and better protect human health and the environment.	Fact/Data Sheet	U.S. EPA	09/01/2015	U.S. EPA. 2015. Final NPDES Electronic Reporting Rule. (September).		3	No	No	08520
9.2	EPA-HQ-OW-2015-0665-1094	2015 Discharge Monitoring Report (DMR) Database for F&B - DMRLTOutput2015_F&B_v1 - DCN 08523	2015 DMR loadings data compiled in an access database, supporting the miscellaneous food and beverage review.	Data	ERG	12/31/2015	DMR Loading Tool Output - 2015 DMR Loadings Data	Miscellaneous Foods and Beverages	0	No	No	08523



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
9.3	EPA-HQ-OW-2015-0665-0399	Memorandum from ERG to Bill Swietlik, US EPA, Re: Comparison of Canada's National Pollutant Release Inventory and the Toxics Release Inventory Pollutant Data by Category for the Effluent Guidelines Planning Review Report Supporting the Final 2016 Effluent Guidelines Program Plan - DCN 08403	Memorandum describing the NPRI and TRI data comparison for the ELG Planning Review Report Supporting the Final 2016 ELG Plan.	Memorandum	ERG		ERG. (2015). Comparison of Canada's NPRI and the TRI Pollutant Data by Category for the RR Supporting the Final 2016 Plan. Chantilly, VA. (Dec).		14	No	No	08403
9.3	EPA-HQ-OW-2015-0665-1093	Canada's National Pollutant Release Inventory Database 2013 – NPRICompare2013 - DCN 08410	2013 NPRI water release data compiled in an access database, for the ELG Planning Review Report Supporting the Final 2016 ELG Plan.	Data	ERG	04/24/2018	NPRI Data Output - 2013 Water Release Data		0	No	No	08410
9.3	EPA-HQ-OW-2015-0665-0404	Frequently Asked Questions and the National Pollutant Release Inventory (NPRI) - DCN 08412	Fact sheet detailing frequently asked questions about Canada's NPRI database.	Fact/Data Sheet	Environment Canada	12/11/2013	Environment Canada. 2013. Frequently Asked Questions and the National Pollutant Release Inventory (NPRI). Gatineau, QC (December 11).		5	No	No	08412

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
9.3	EPA-HQ-OW-2015-0665-0405	National Pollutant Release Inventory (NPRI) Sector Coverage Study for the 2008 Reporting Year - DCN 08413	Study conducted on NPRI data to analyze coverage and compliance.	Publication Copyrighted Material	Environment Canada	01/01/2013	Environment Canada. 2013. National Pollutant Release Inventory (NPRI) Sector Coverage Study for the 2008 Reporting Year. Gatineau, QC.		84	No	Yes	08413
9.3	EPA-HQ-OW-2015-0665-0411	2014-2015 NPRI Substance List - DCN 08414	Substance list for the 2014-2015 NPRI dataset.	Fact/Data Sheet	Environment Canada	11/28/2014	Environment Canada. 2014. 2014-2015 NPRI Substance List. Gatineau, QC (November 28).		0	No	No	08414
9.3	EPA-HQ-OW-2015-0665-0406	Raw NPRI Data: Inventaire national des rejets de polluants 2013 / National Pollutant Release Inventory 2013 - DCN 08415	Raw NPRI data set for 2013.	Data	Environment Canada	09/16/2014	Environment Canada. 2014. National Pollutant Release Inventory 2013. Gatineau, QC (September 16). Accessed: February 11, 2015.		0	No	No	08415

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
9.3	EPA-HQ-OW-2015-0665-0407	Guide for Reporting to the National Pollutant Release Inventory 2014 and 2015 - DCN 08416	Reporting guide for NPRI designed to assist facility owners and operators in understanding the NPRI reporting requirements, and in determining if they are required to report to NPRI.	Publication; Copyrighted Materials	Environment Canada	01/01/2015	Environment Canada. 2015. Guide for Reporting to the National Pollutant Release Inventory 2014 and 2015. Gatineau, QC.		63	No	Yes	08416
9.3	EPA-HQ-OW-2015-0665-0408	Guide for Using and Interpreting the National Pollutant Release Inventory (NPRI) Data - DCN 08417	Guidance to analyze NPRI data.	Guidance	Environment Canada	03/25/2015	Environment Canada. 2015. Guide for Using and Interpreting the National Pollutant Release Inventory (NPRI) Data. Gatineau, QC (March 25).		5	No	No	08417
9.5	EPA-HQ-OW-2015-0665-0400	Memorandum from Jill Lucy, Eastern Research Group, Inc. to Bill Swietlik, U.S. EPA. Re: Review of Toxic Weighting Factors in Support of the Final Steam Electric Effluent Limitations Guidelines and Standards - DCN 08404	Memorandum describing the review and revision of TWFs in support of the Steam ELGs.	Memorandum	ERG	09/21/2015	ERG. (2015). Memorandum from Jill Lucy, ERG to Bill Swietlik, U.S. EPA. RE: Review of TWFs for the Steam ELGs. Chantilly, VA. (Sept 21).		19	No	No	08404

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0530	Core Technologies - DCN CWT00003	Summary of core technologies created by Heartland Technology Partners, LLC.	Fact/Data Sheet	Heartland Technology Partners, LLC	01/01/2014	Heartland Technology Partners, LLC. 2014. Core Technologies. Available online at: <a href="http://www.heartlandtech.com/about/core-technologies">http://www.heartlandtech.com/about/core-technologies</a> .	Centralized Waste Treaters	2	No	No	CWT00003
1.1	EPA-HQ-OW-2015-0665-0536	Wastewater Technology Fact Sheet: Chemical Precipitation - DCN CWT00010	A fact sheet that describes advantages, disadvantages, additive chemicals, costs, and targeted pollutants.	Publication; USEPA	U.S. EPA	09/01/2000	U.S. EPA. 2000. Wastewater Technology Fact Sheet: Chemical Precipitation. EPA-832-F-00-018. (September).	Centralized Waste Treaters	8	No	No	CWT00010
1.1	EPA-HQ-OW-2015-0665-0537	Water Treatment Technology Fact Sheet: Crystallization - DCN CWT00011	A data/fact sheet that describes crystallization process description, technical capabilities, technical limitations, and costs.	Fact/Data Sheet	ALL Consulting	01/01/2011	ALL Consulting. 2011. Water Treatment Technology Fact Sheet: Crystallization.	Centralized Waste Treaters	2	No	No	CWT00011

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0538	Water Treatment Technology Fact Sheet: Reverse Osmosis - DCN CWT00012	A data/fact sheet that describes reverse osmosis process description, technical capabilities, technical limitations, and costs.	Fact/Data Sheet	ALL Consulting	01/01/2011	ALL Consulting. 2011. Water Treatment Technology Fact Sheet: Reverse Osmosis.	Centralized Waste Treaters	3	No	No	CWT00012
1.1	EPA-HQ-OW-2015-0665-0539	EVRAS™ Evaporative Reduction and Solidification - DCN CWT00013	A fact sheet that describes the technical capabilities of the EVRAS, a evaporation/crystallization technology produce by Intervras.	Fact/Data Sheet	Intervras Technologies, LLC	01/01/2011	Intervras Technologies, LLC. 2011. EVRAS™ Evaporative Reduction and Solidification.	Centralized Waste Treaters	4	No	No	CWT00013
1.1	EPA-HQ-OW-2015-0665-0542	Technical Development Document for Effluent Limitations Guidelines and Standards for Oil and Gas Extraction - DCN CWT00019	The technical development for the unconventional oil and gas rule making.	Publication; USEPA	U.S. EPA	06/01/2016	U.S. EPA. 2016. Technical Development Document for Effluent Limitations Guidelines and Standards for Oil and Gas Extraction. EPA-820-R-16-003.	Centralized Waste Treaters	197	No	No	CWT00019

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0545	Physicochemical Processes for Water Quality Control - DCN CWT00025	A textbook that discusses various wastewater treatment technologies. Discussions include basic principles and process descriptions. Sometimes descriptions are math intensive.	Publication; Copyrighted Material	Walter Weber	01/01/1972	Walter Weber. 1972. Physicochemical Processes for Water Quality Control. University of Michigan. Wiley-Interscience.	Centralized Waste Treaters	8	No	Yes	CWT00025
1.1	EPA-HQ-OW-2015-0665-0546	Wastewater Engineering: Treatment and Reuse - DCN CWT00026	A textbook that describes various wastewater treatment technologies from an engineering perspective and in reuse applications.	Publication; Copyrighted Material	Metcalf and Eddy	01/01/2003	Metcalf and Eddy. 2003. Wastewater Engineering: Treatment and Reuse. McGraw Hill. 4th Edition.	Centralized Waste Treaters	17	No	Yes	CWT00026
1.1	EPA-HQ-OW-2015-0665-0547	Water Treatment: Principles and Design - DCN CWT00027	A textbook that provides technical information on various wastewater treatment technologies: ion exchange, reverse osmosis, and other less advanced treatment technologies.	Publication; Copyrighted Material	Crittenden, John	01/01/2005	Crittenden, John. 2005. Water Treatment: Principles and Design. John Wiley & Sons, Inc. 2nd Edition.	Centralized Waste Treaters	12	No	Yes	CWT00027

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0548	The Electrodialysis Alternative for Produced Water Management - DCN CWT00028	Article on electrodialysis as an economical separation process in the treatment of brackish water and as a treatment for the processing of produced waters with weak to moderate levels of TDS. Provides performance results for an integrated electrodialysis.	Report	Hayes, Tom	09/01/2004	Hayes, Tom. 2004. The Electrodialysis Alternative for Produced Water Management. Gas Technology Institute. (September)	Centralized Waste Treaters	6	No	No	CWT00028
1.1	EPA-HQ-OW-2015-0665-0550	Produced Water Pretreatment for Water Recovery and Salt Production - DCN CWT00032	A detailed report that investigates wastewater treatment technologies for shale gas wastewater.	Report	Silva, James	01/26/2012	Silva, James. 2012. Produced Water Pretreatment for Water Recovery and Salt Production Report 08122-36. RPSEA. (January 26).	Centralized Waste Treaters	67	No	No	CWT00032
1.1	EPA-HQ-OW-2015-0665-0555	Breakthrough Mobile Water Treatment Converts 75% of Fracturing Flowback Fluid to Fresh Water and Lowers CO2 Emissions - DCN CWT00038	This journal article provides information on an advanced oxidation treatment technology that is deployed in the Woodford shale play.	Publication; Copyrighted Material	Horn, Aaron	03/23/2009	Horn, Aaron. 2009. Breakthrough Mobile Water Treatment Converts 75% of Fracturing Flowback Fluid to Fresh Water and Lowers CO2 Emissions. SPE.	Centralized Waste Treaters	9	No	Yes	CWT00038

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0556	Treatment of Flow Back and Produced Water from the Hydraulic Fracturing of Oil – Shale - DCN CWT00039	This presentation provides treatment performance data for electrocoagulation along with flowback pollutant concentrations for various shale plays.	Report	Ecolotron Water Recovery Systems	01/01/2012	Ecolotron Water Recovery Systems. 2012. Treatment of Flow Back and Produced Water from the Hydraulic Fracturing of Oil – Shale.	Centralized Waste Treaters	4	No	Yes	CWT00039
1.1	EPA-HQ-OW-2015-0665-0557	CARES McKean - DCN CWT00040	This website provides location information for a CWT that uses evaporation/distillation to treat shale gas wastewater in the Marcellus.	Publication; Copyrighted Material	CARES	01/28/2013	CARES. 2013. CARES McKean. Altela Rain.	Centralized Waste Treaters	2	No	Yes	CWT00040
1.1	EPA-HQ-OW-2015-0665-0558	Red Desert: Facilities - DCN CWT00042	This website provides general treatment information and the location for a CWT located in Wyoming.	Publication; Copyrighted Material	Red Desert	01/28/2013	Red Desert. 2013. Red Desert: Facilities. Available online at: <a href="http://reddesertwater.com/facilities.html">http://reddesertwater.com/facilities.html</a> . Downloaded on 28 January 2013.	Centralized Waste Treaters	5	No	Yes	CWT00042



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0559	Evaluation of the Aqua Pure Mechanical Vapor Recompression System in the Treatment of Shale Gas Flowback Water Report No. 08122-05.11 - DCN CWT00043	This report provides information on evaporation/condensation as a treatment technology for flowback.	Report	Hayes, Thomas; et al	03/12/2012	Hayes, Thomas; et al. 2012. Evaluation of the Aqua Pure Mechanical Vapor Recompression System in the Treatment of Shale Gas Flowback Water. RPSEA.	Centralized Waste Treaters	43	No	No	CWT00043
1.1	EPA-HQ-OW-2015-0665-0560	Gas Well Drilling Brine Treatment Facility Opens in Fairmont - AOP Clearwater LLC is set to begin operation of its gas well drilling brine recycling facility in Fairmont - DCN CWT00044	Gas Well Drilling Brine Treatment Facility Opens in Fairmont	Fact/Data Sheet	Kasey, Pam	11/19/2009	Kasey, Pam. 2009. Gas Well Drilling Brine Treatment Facility Opens in Fairmont. The State Journal.	Centralized Waste Treaters	2	No	No	CWT00044
1.1	EPA-HQ-OW-2015-0665-0561	Summary of the Technical Workshop on Wastewater Treatment and Related Modeling - DCN CWT00045	This document summarizes the April 18, 2013 Workshop studying potential impacts of hydraulic fracturing on drinking water resources.	Publication; USEPA	U.S. EPA	04/18/2013	U.S. EPA. 2013. Summary of the Technical Workshop on Wastewater Treatment and Related Modeling. (April 18).	Centralized Waste Treaters	135	No	No	CWT00045

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0563	H2OForward Service - Sustainable Development of Completions - DCN CWT00048	A presentation which discusses produced water recycling treatment options.	Publication; Copyrighted Material	Dale, Walter	10/29/2013	Dale, Walter. 2013. H2OForward Service - Sustainable Development of Completions. Multi-Chem - A Halliburton Service.	Centralized Waste Treaters	41	No	Yes	CWT00048
1.1	EPA-HQ-OW-2015-0665-0564	Strategies for Sustainable Water Transport Lessons Learned in the Marcellus Applied to the Niobrara - DCN CWT00049	A presentation that discusses water transportation and treatment options.	Publication; Copyrighted Material	Wilkerson, Tommy	10/30/2013	Wilkerson, Tommy. 2013. Strategies for Sustainable Water Transport Lessons Learned in the Marcellus Applied to the Niobrara. Carrizo Oil & Gas, Inc.	Centralized Waste Treaters	21	No	No	CWT00049
1.1	EPA-HQ-OW-2015-0665-0594	Unconventional Oil and Gas Wastewater Treatment Technologies DCN CWT00051	This report describes wastewater treatment technologies used by the UOG industry.	Publication; USEPA	U.S. EPA	06/01/2016	U.S. EPA. 2016. Unconventional Oil & Gas Wastewater Treatment Technologies. U.S. EPA Office of Water, Engineering and Analysis Division.	Centralized Waste Treaters	123	No	No	CWT00051

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0594.1	Unconventional Oil and Gas Wastewater Treatment Technologies - Attachment 1: Treatment Technology Costs Spreadsheet DCN CWT00051.A1	This attachment contains information about the treatment technologies and associated costs compiled in the report	Publication; USEPA	U.S. EPA	06/01/2016	U.S. EPA. 2016. UOG WW Treatment Technologies - Attachment 1: Treatment Technology Costs Spreadsheet.	Centralized Waste Treaters	1	No	No	CWT00051.A1
1.1	EPA-HQ-OW-2015-0665-0595	Development Document for Proposed Effluent Limitations Guidelines and Standards for the Centralized Waste Treatment Industry - DCN CWT00053	EPA Document EPA-821-R-98-020. EPA's Development Document for Proposed ELGS for the Centralized Waste Treatment Industry. Includes information on data collection, scope and application of the proposed rule, description of the CWT industry, pollutants, etc	Publication; USEPA	U.S. EPA	12/01/1998	U.S. EPA. 1998. Development Document for Proposed Effluent Limitations Guidelines and Standards for the Centralized Waste Treatment Industry.	Centralized Waste Treaters	406	No	No	CWT00053
1.1	EPA-HQ-OW-2015-0665-0597	The Real Cost of ZLD for Shale Gas Frac Water in the Marcellus Shale Play - DCN CWT00055	Conference Proceedings describing of the true costs of a complete zero liquid discharge (ZLD) solution for the Marcellus Shale frac water by focusing on the chemistry of frac water.	Report	Shaw, William A.	09/01/2011	Shaw, William A. 2011. The Real Cost of ZLD for Shale Gas Frac Water in the Marcellus Shale Play. HPD, LLC. Veolia Water Solutions & Technologies.	Centralized Waste Treaters	14	No	No	CWT00055

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0598	212 Resources VACOM Technology - DCN CWT00056	Barry Mertz explained the system design overview of the VACOM, characteristics of the concentrated brine, Energy usage, and ball park costs for evaporation in general.	Meeting/Teleconference Materials	Mertz, Barry	10/14/2011	Mertz, Barry. 2011. 212 Resources VACOM Technology. 212 Resources.	Centralized Waste Treaters	3	No	No	CWT00056
1.1	EPA-HQ-OW-2015-0665-0599	GE Power and Water Wastewater Treatment Technologies - DCN CWT00057	A teleconference between Mark Wilson and Brent Ruminski. The discussion covered general shale gas industry background including NORM, wastewater management, and trucking. Wilson also provided his thoughts on evaporation and crystallization technologies.	Meeting/Teleconference Materials	Wilson, Mark	11/10/2011	Wilson, Mark. 2011. GE Power and Water Wastewater Treatment Technologies. GE Power and Water.	Centralized Waste Treaters	3	No	No	CWT00057
1.1	EPA-HQ-OW-2015-0665-0600	EVRAS Evaporation Technology - DCN CWT00058	A teleconference call with a sales manager from INTEVRAS discussing a crystallization/evaporation wastewater treatment technology for shale gas operators.	Meeting/Teleconference Materials	Adams, Andy	09/26/2011	Adams, Andy. 2011. EVRAS Evaporation Technology. Intevras & Layne Water. (September 26).	Centralized Waste Treaters	1	No	No	CWT00058

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0601	Siemens Reverse Osmosis Technology - DCN CWT00059	A teleconference call with engineers from Siemens discussing reverse osmosis as a wastewater treatment technology for shale gas operators.	Meeting/Teleconference Materials	Alexander, Jerry	09/28/2011	Alexander, Jerry. 2011. Siemens Reverse Osmosis Technology. Siemens. (September 28).	Centralized Waste Treaters	4	No	No	CWT00059
1.1	EPA-HQ-OW-2015-0665-0602	Fountain Quail NOMAD Evaporator - DCN CWT00060	Jaime and Brent Discussed the NOMAD evaporator (mechanical vapor compression). Jaime provided general information on energy usage, water recovery, and required pretreatment for the NOMAD evaporator.	Meeting/Teleconference Materials	Roman, Jaime	10/26/2011	Roman, Jaime. 2011. Fountain Quail NOMAD Evaporator. Fountain Quail. (October 26).	Centralized Waste Treaters	2	No	No	CWT00060
1.1	EPA-HQ-OW-2015-0665-1026	Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - DCN CWT00061	This memorandum describes methodology for compiling wastewater volumes and characterization data in the Technical Development Document (TDD).	Memorandum	ERG	06/01/2016	ERG. 2016. Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation Memorandum	Centralized Waste Treaters	68	No	No	CWT00061

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-1026.01	Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 1: UOG PW Data Compilation - DCN CWT00061.A1	UOG Produced Water Data Compilation. Underlying data for TDD Tables C-6, C-7, and C-8	Data	ERG	06/01/2016	ERG. 2016. Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation —A01: UOG Produced Water Data Compilation.	Centralized Waste Treaters	7	No	No	CWT00061.A01
1.1	EPA-HQ-OW-2015-0665-1026.02	Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 2: DI Desktop Long-term Produced Water Generation Rates - DCN CWT00061.A2	ERG analysis of DI Desktop data to tabulate long-term produced water generation rates on a per well basis	Data	ERG	06/01/2016	ERG. 2016. UOG Produced Water Volumes and Characterization Data Compilation - A02: DI Desktop Long-term Produced Water Rates	Centralized Waste Treaters	3	No	No	CWT00061.A02
1.1	EPA-HQ-OW-2015-0665-1026.03	CBI_Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 3: DI Desktop Long-term Produced Water Generation Rates - DCN CWT00061.A3	CBI_Access database with DI Desktop long term produced water generation rate data	Data	ERG	06/01/2016	ERG. 2016. UOG Produced Water Volumes and Characterization Data Compilation—A03: DI Desktop Long-term Produced Water Rates_CBI.	Centralized Waste Treaters	1	Yes	Yes	CWT00061.A03

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-1026.04	Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 4: FracFocus Fracturing Fluid Volumes - DCN CWT00061.A4	FracFocus fracturing fluid volumes data	Data	ERG	06/01/2016	ERG. 2016. Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation—A0 4: FracFocus Fracturing Fluid Volume	Centralized Waste Treaters	4	No	No	CWT00061.A04
1.1	EPA-HQ-OW-2015-0665-1026.05	CBI Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 5: FracFocus Fracturing Fluid Volumes - DCN CWT00061.A5	CBI Access database with FracFocus fracturing fluid volume data. This is proprietary data, so it is being handled as CBI	Data	ERG	06/01/2016	ERG. 2016. Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation—A0 5: FracFocus Fracturing Fluid Volume_CBI.	Centralized Waste Treaters	1	Yes	Yes	CWT00061.A05
1.1	EPA-HQ-OW-2015-0665-1026.06	Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 6: Bakken Flowback Recovery - DCN CWT00061.A6	Bakken flowback volumes and raw data analysis.	Data	ERG	06/01/2016	ERG. 2016. Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation—A0 6: Bakken Flowback Water Rates	Centralized Waste Treaters	2	No	No	CWT00061.A06

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-1026.07	Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 7: New Mexico Flowback Recovery - DCN CWT00061.A7	New Mexico flowback water calculation and raw data analysis.	Data	ERG	06/01/2016	ERG. 2016. Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation—A0 7: New Mexico Flowback Water Rates.	Centralized Waste Treaters	2	No	No	CWT00061.A07
1.1	EPA-HQ-OW-2015-0665-1026.08	Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 8: Utica Produced Water Data - DCN CWT00061.A8	Flowback and long-term produced water volumes for horizontal wells in Ohio.	Data	ERG	06/01/2016	ERG. 2016. Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation—A0 8: Utica Flowback and Produced Water.	Centralized Waste Treaters	10	No	No	CWT00061.A08
1.1	EPA-HQ-OW-2015-0665-1026.09	Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 9: Wyoming Flowback Recovery - DCN CWT00061.A09	Wyoming shale flowback water calculation, raw data, and analysis.	Data	ERG	06/01/2016	ERG. 2016. Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation—A0 9: Wyoming Flowback Water Rates	Centralized Waste Treaters	3	No	No	CWT00061.A09



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-1026.10	Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 10: Codell-Niobrara Flowback Recovery and Long-term Produced Water Rates - DCN CWT00061.A10	Codell-Niobrara Flowback Recovery and Long-term Produced Water Rates	Data	ERG	06/01/2016	ERG. 2016. UOG Produced Water Volumes & Characterization Data Compilation—A10: Codell-Niobrara Flowback Recovery and Long-term Produced Water Rates	Centralized Waste Treaters	2	No	No	CWT00061.A10
1.1	EPA-HQ-OW-2015-0665-1026.11	Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 11: Colorado Flowback Recovery - DCN CWT00061.A11	Colorado shale flowback water calculation and analysis.	Data	ERG	06/01/2016	ERG. 2016. Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation—A11: Colorado Flowback Water Rates.	Centralized Waste Treaters	2	No	No	CWT00061.A11
1.1	EPA-HQ-OW-2015-0665-1026.12	Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 12: UOG Wastewater Characterization Analysis - DCN CWT00061.A12	A spreadsheet with analyses of UOG wastewater characterization	Data	ERG	06/01/2016	ERG. 2016. UOG Produced Water Volumes and Characterization Data Compilation - A12: UOG Wastewater Characterization Analysis	Centralized Waste Treaters	18	No	No	CWT00061.A12

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-1026.13	Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 13: UOG Wastewater Characterization Database - DCN CWT00061.A13	A database with analyses of UOG wastewater characterization	Data	ERG	06/01/2016	ERG. 2016. UOG Produced Water Volumes and Characterization Data Compilation - A13: UOG Wastewater Characterization Database	Centralized Waste Treaters	1	No	No	CWT00061.A13
1.1	EPA-HQ-OW-2015-0665-1026.14	Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 14: USGS Produced Water Database - DCN CWT00061.A14	A spreadsheet with analyses from the US Geological Survey produced water database	Data	ERG	06/01/2016	ERG. 2016. Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - A14: USGS Produced Water Database	Centralized Waste Treaters	5	No	No	CWT00061.A14
1.1	EPA-HQ-OW-2015-0665-1026.15	Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 15: USGS Produced Water Database - DCN CWT00061.A15	The produced water database from the US Geological Survey	Data	ERG	06/01/2016	ERG. 2016. Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - A15: USGS Produced Water Database	Centralized Waste Treaters	1	No	No	CWT00061.A15

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-1026.16	CBI_Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 16: ORD Non-CBI Operator Data - DCN CWT00061.A16	CBI_A database of non-CBI operator data from the Office of Research and Development. This is proprietary data and is being treated as CBI.	Data	ERG	06/01/2016	ERG. 2016. Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - A16: ORD Non-CBI Operator Data_CBI.	Centralized Waste Treaters	1	Yes	Yes	CWT00061.A16
1.1	EPA-HQ-OW-2015-0665-1026.17	Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 17: WY OGCC Database - DCN CWT00061.A17	A spreadsheet with analyses from the WY OGCC produced water database	Data	ERG	06/01/2016	ERG. 2016. Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - A17: WY OGCC Database.	Centralized Waste Treaters	1	No	No	CWT00061.A17
1.1	EPA-HQ-OW-2015-0665-1026.18	Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - Attachment 18: WY OGCC Excel Calculations - DCN CWT00061.A18	Excel functions to calculate the median values and number of samples for each unique Basin, Formation, and Parameter in the WY OGCC database.	Data	ERG	06/01/2016	ERG. 2016. Unconventional Oil and Gas (UOG) Produced Water Volumes and Characterization Data Compilation - A18: WY OGCC Excel Calculations.	Centralized Waste Treaters	1	No	No	CWT00061.A18

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0618	Offsite Commercial Disposal of Oil and Gas Exploration and Production Waste: Availability, Options, and Costs - DCN CWT00097	In 2005, DOE tasked Argonne with updating the data concerning offsite exploration and production (E&P) waste disposal methods and costs. This report presents Argonne's findings.	Report	Puder, M.G., and J.A. Veil	08/01/2006	Puder, M.G. and J.A. Veil. 2006. Offsite Commercial Disposal of O&G E&P Waste: Availability, Options, and Costs. Argonne National Laboratory.	Centralized Waste Treaters	148	No	No	CWT00097
1.1	EPA-HQ-OW-2015-0665-0619	Design of a Mobile Wastewater Treatment System for Hydraulic Fracturing Waste - DCN CWT00099	The team designed a system to treat the contaminated water produced by hydraulic fracturing of shale rock for natural gas. We did so by combining and optimizing several current treatment technologies to produce a mobile-scale process.	Report	Marc Panu, Matthew Claussen and Faiz Talib	04/19/2013	Marc Panu, Matthew Claussen and Faiz Talib. 2013. Design of a Mobile Wastewater Treatment System for Hydraulic Fracturing Waste. Chevron Group.	Centralized Waste Treaters	53	No	No	CWT00099
1.1	EPA-HQ-OW-2015-0665-0622	Taking a Proactive Approach to Water Recycling in the Barnett Shale - DCN CWT00104	This presentation provides Devon overview and current activity, Overview of two waste waters in the Barnett, Devon's proactive approach to water recycling and future activity in water recycling.	Meeting or Teleconference Materials	Jay Ewing	02/29/2008	Jay Ewing. 2008. Taking a Proactive Approach to Water Recycling in the Barnett Shale. Devon Energy.	Centralized Waste Treaters	30	No	No	CWT00104

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0623	Welcome to Purestream Technology - DCN CWT00106	A privately held R&D company providing a suite of patented environmental solutions focused on the treatment of wastewater, air emissions, renewable energy and data tracking.	Fact/Data Sheet	Purestream Technology	01/01/2011	Purestream Technology. 2011. Welcome to Purestream Technology. <a href="http://purestreamtechnology.com/downloads/purestream-technology-overview-2011.pdf">http://purestreamtechnology.com/downloads/purestream-technology-overview-2011.pdf</a> .	Centralized Waste Treaters	47	No	No	CWT00106
1.1	EPA-HQ-OW-2015-0665-0569	Small Entity Compliance Guide: Centralized Waste Treatment Effluent Limitations Guidelines and Pretreatment Standards - DCN CWT00144	This document is published by the U.S. Environmental Protection Agency (EPA) as our official compliance guide for small entities, as required by the Small Business Regulatory Enforcement Fairness Act of 1996. (EPA 821-B-01-003)	Publication; USEPA	U.S. EPA	06/01/2001	U.S.EPA. 2011. Small Entity Compliance Guide: Centralized Waste Treatment Effluent Limitations Guidelines & Pretreatment Standards. EPA-821-B-01-003.	Centralized Waste Treaters	81	No	No	CWT00144
1.1	EPA-HQ-OW-2015-0665-0574	Oil and Gas Produced Water Management and Beneficial Use in the Western United States - DCN CWT00157	Produced water from oil and gas operations is currently handled as a waste product.	Report	Katie Guerra, Katharine Dahm, Steve Dunder	09/01/2011	U.S. DOI. 2011. Katie Guerra, Katharine Dahm, and Steve Dunder. Oil and Gas Produced Water Management and Beneficial Use in the Western United States	Centralized Waste Treaters	129	No	No	CWT00157

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0575	Produced Water Volumes and Management Practices in 2012. - DCN CWT00158	This new report updates and expands the 2009 report to provide a current estimate for the volume of produced water generated from all onshore and offshore oil and gas production in the United States during the 2012 calendar year. The volume estimate repre	Report	Clark, C.E., and J.A. Veil	04/22/2015	22.U.S. GWPC. 2015. Clark, C.E., and J.A. Veil. U.S. Produced Water Volumes and Management Practices in 2012. (April).	Centralized Waste Treaters	119	No	No	CWT00158
1.1	EPA-HQ-OW-2015-0665-0576	Reuters Fundamentals: Big Cat Energy Corp - DCN CWT00170	With over 35 years' experience of collecting and publishing company fundamentals, Reuters covers 99% of the world's market cap.	Fact/Data Sheet	Reuters	01/01/2014	Reuters. 2014. Reuters Fundamentals: Big Cat Energy Corp. 11 July 2014. Accessed July 16, 2014.	Centralized Waste Treaters	2	No	No	CWT00170
1.1	EPA-HQ-OW-2015-0665-0577	Annual Energy Outlook 2014 with Projections to 2040 - DCN CWT00171	Presents long-term annual projections of energy supply, demand, and prices focused on the U.S. through 2040, based on results from EIA's National Energy Modeling System (NEMS).	Report	U.S. DOE	04/01/2014	United States Department of Energy (U.S. DOE). 2014. United States Energy Information Administration (EIA).	Centralized Waste Treaters	269	No	No	CWT00171

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0578	Waste Management Acquires Two North Dakota Energy Services Companies - DCN CWT00172	Waste Management, Inc. (NYSE: WM) today announced that it has acquired Summit Energy Services and Liquid Logistics, two Williston, North Dakota energy services companies.	Press Release, Public Announcement/Notice	Jennifer Andrews	08/01/2013	Waste Management, Inc. 2013. "Waste Management Acquires Two North Dakota Energy Services Companies." August 1, 2013.	Centralized Waste Treaters	2	No	No	CWT00172
1.1	EPA-HQ-OW-2015-0665-0579	Eureka Resources- The First Step to Cleaner Waters - DCN CWT00174	Online Webpage for Eureka Resources and their oil and gas wastewater operations	Other	Eureka Resources	01/01/2016	Eureka Resources. 2016. Web. Accessed 28 April 2016. Available electronically at: <a href="http://eureka-resources.com/about-us/">http://eureka-resources.com/about-us/</a>	Centralized Waste Treaters	2	No	No	CWT00174
1.1	EPA-HQ-OW-2015-0665-0580	U.S. rig count hits all-time low in recorded data - DCN CWT00184	The overall weekly US rig count is now at its lowest point in Baker Hughes Inc. data that begins in the 1940s, and perhaps since the infancy of US oil and gas industry.	Economic Analysis	Matt Zborowski	03/11/2016	Zborowski, Matt. 2016. "U.S. rig count hits all-time low in recorded data." Oil and Gas Journal.	Centralized Waste Treaters	3	No	No	CWT00184

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0581	Anaerobic Membrane Bioreactor (ADI-AnMBR) - DCN CWT00185	Vendor profile for Anaerobic Membrane Bioreactor (ADI-AnMBR) by the ADI System Inc.	Fact/Data Sheet	ADI System Inc.	01/01/2015	ADI System Inc. 2015. Vendor Profile: Anaerobic Membrane Bioreactor (ADI-AnMBR)	Centralized Waste Treaters	3	No	Yes	CWT00185
1.1	EPA-HQ-OW-2015-0665-0583	Patented Evaporation & Crystallization Process - DCN CWT00191	Presentation from Shale Gas Innovation and Commercialization Center Technology Showcase	Data	Fairmont Brine Processing	01/01/2015	Fairmont Brine Processing. 2015. Presentation from Shale Gas Innovation and Commercialization Center Technology Showcase.	Centralized Waste Treaters	11	No	No	CWT00191
1.1	EPA-HQ-OW-2015-0665-0644	Short Term Energy Outlook April 2016 - DCN CWT00213	During the 2016 April-through-September summer driving season, U.S. regular gasoline retail prices are forecast to average \$2.04/gallon (gal), compared with \$2.63/gal last summer	Data	U.S. Energy Information Administration	01/01/2016	United States Department of Energy (U.S. DOE). 2016b. United States Energy Information Administration (EIA). Short Term Energy Outlook April 2016.	Centralized Waste Treaters	51	No	No	CWT00213



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0646	North American Industry Classification System Search DCN CWT00217	The North American Industry Classification System website	Other	U.S Census Bureau	01/01/2016	United States Census Bureau (U.S. Census). 2016. North American Industry Classification System Search.	Centralized Waste Treaters	1	No	No	CWT00217
1.1	EPA-HQ-OW-2015-0665-0649	Natural Gas Gross Withdrawals and Production: Marketed Production DCN CWT00224	United States Energy Information Administration (EIA) Report on Natural Gas Gross Withdrawals and Production: Marketed Production	Data	U.S. DOE	01/01/2016	United States Department of Energy (U.S. DOE). 2016a. United States Energy Information Administration (EIA).	Centralized Waste Treaters	2	No	No	CWT00224
1.1	EPA-HQ-OW-2015-0665-0661	U.S. Crude Oil Production (Thousand barrels). DCN CWT00225	United States Energy Information Administration (EIA) Report on U.S. Crude Oil Production (Thousand barrels)	Data	U.S. DOE	01/01/2016	United States Department of Energy (U.S. DOE). 2016c. United States Energy Information Administration (EIA).	Centralized Waste Treaters	2	No	No	CWT00225

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0666	U.S. Dry Shale Gas Production DCN CWT00226	United States Energy Information Administration (EIA) Report on U.S. Dry Shale Gas Production	Data	U.S. DOE	01/01/2016	United States Department of Energy (U.S. DOE). 2016d. United States Energy Information Administration (EIA).	Centralized Waste Treaters	5	No	No	CWT00226
1.1	EPA-HQ-OW-2015-0665-0671	Hoover's Database DCN CWT00228	Allows access to the largest commercial database of 85 million companies, 100 million professionals, and 900 industry segments; relevant social media links; and customizable news feeds	Data	Dun & Bradstreet (D&B)	01/01/2016	Dun & Bradstreet (D&B). 2016. Hoover's Database. Available electronically at: www.hoovers.com.	Centralized Waste Treaters	2	No	No	CWT00228
1.1	EPA-HQ-OW-2015-0665-0672	Annual Energy Outlook 2015 with Projections to 2040 DCN CWT00229	United States Energy Information Administration (EIA) Report on Annual Energy Outlook 2015 with Projections to 2040.	Data	U.S. DOE	01/01/2015	United States Department of Energy (U.S. DOE). 2015. United States Energy Information Administration (EIA).	Centralized Waste Treaters	269	No	No	CWT00229

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0676	Vendor Profile: Aquatech - DCN CWT00231	A profile of the company AquaTech, which provides water purification technologies for industrial and infrastructure markets, with a focus on desalination, water reuse, and zero liquid discharge.	Publication; Copyrighted Materials	ALL Consulting	01/01/2011	ALL Consulting. 2011. Vendor Profile: AquaTech.	Centralized Waste Treaters	1	No	No	CWT00231
1.1	EPA-HQ-OW-2015-0665-0677	Vendor Profile: GeoPure Hydrotechnologies - DCN CWT00232	A profile of the commercial stage, full service provider GeoPure Hydrotechnologies, which focuses on contaminated water recycling and purification rather than disposal.	Publication; Copyrighted Materials	ALL Consulting	01/01/2011	ALL Consulting. 2011. Vendor Profile: GeoPure Hydrotechnologies.	Centralized Waste Treaters	1	No	No	CWT00232
1.1	EPA-HQ-OW-2015-0665-0678	Vendor Profile: INTEVRAS Technologies, LLC - DCN CWT00233	A profile of the industrial waste water treatment company INTEVRAS Technologies LLC, which focuses on waste water reduction, crystallization, and freshwater extraction using evaporative reduction and solidification.	Publication; Copyrighted Materials	ALL Consulting	01/01/2011	ALL Consulting. 2011. Vendor Profile: INTEVRAS Technologies, LLC.	Centralized Waste Treaters	1	No	No	CWT00233

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0679	Vendor Profile: MI SWACO - DCN CWT00234	A profile of the supplier/engineering designer of drilling fluid systems MI SWACO.	Publication; Copyrighted Materials	ALL Consulting	01/01/2011	ALL Consulting. 2011. Vendor Profile: MISWACO.	Centralized Waste Treaters	2	No	No	CWT00234
1.1	EPA-HQ-OW-2015-0665-0680	Vendor Profile: Veolia Water Solutions & Technologies - DCN CWT00235	A profile of the water and wastewater treatment company NA Water Systems, a technical subsidiary of Veolia Water Solutions and Technology.	Publication; Copyrighted Materials	ALL Consulting	01/01/2011	ALL Consulting. 2011. Vendor Profile: Veolia.	Centralized Waste Treaters	1	No	No	CWT00235
1.1	EPA-HQ-OW-2015-0665-0681	Fact Sheet To Permit Number Co0048739 Bopco, L.P., Yellow Creek Water Management Facility Rio Blanco County - DCN CWT00236	A factsheet providing supplemental information about permit number CO0048739, including information about the receiving stream, facility, performance history, effluent limitations, and terms and conditions.	Fact/Data Sheet	Colorado Department of Public Health	01/10/2011	CO Department Of Public Health And Env. 2011. CDPS Fact Sheet To Permit Number Co0048739 Bopco, L.P., Yellow Creek Water Mgmt Facility Rio Blanco Co.	Centralized Waste Treaters	23	No	No	CWT00236

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0682	Frac Water: Treating Flowback and Produced Water for Re-Use - DCN CWT00237	A website describing the produced water services Omni Water Solutions provides.	Publication; Copyrighted Materials	Omni Water Solutions	01/14/2014	Omni Water Solutions. 2014. Frac Water. Treating Flowback and Produced Water for Re-Use.	Centralized Waste Treaters	2	No	No	CWT00237
1.1	EPA-HQ-OW-2015-0665-0683	AltelaRain System ARS-4000 - DCN CWT00238	A brochure for the ARS-4000 AltelaRain System.	Publication	ALTELA	01/01/2011	ALL Consulting. 2011. Vendor Profile: Altela	Centralized Waste Treaters	2	No	No	CWT00238
1.1	EPA-HQ-OW-2015-0665-0684	MoVap: Mobile Water Distillation System - DCN CWT00239	A fact sheet on the MoVap mobile solution to treat flowback water on-site.	Publication; Copyrighted Materials	AquaTech International Corporation	01/01/2011	AquaTech International Corporation. 2011. Mobile Water Distillation System. Online at: <a href="http://www.aquat ech.com/portals/0/MoVap%20Cut%20Sheet-01.pdf">http://www.aquat ech.com/portals/0/MoVap%20Cut%20Sheet-01.pdf</a>	Centralized Waste Treaters	1	No	No	CWT00239

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0685	Frac Water Reclamation System Reduces Operator's Water Cost - DCN CWT00240	A performance report which describes how the M-I SWACO Frac Water Reclamation system reduced costs.	Publication; Copyrighted Materials	M-I SWACO	01/01/2009	M-I SWACO. 2009. Frac Water Reclamation System Reduces Operator's Water Cost.	Centralized Waste Treaters	3	No	No	CWT00240
1.1	EPA-HQ-OW-2015-0665-0688	Produced and Flowback Water Recycling and Reuse: Economics, Limitations, and Technology DCN CWT00242	Article about UOG wastewater recycling and reuse throughout the U.S.	Study	Boschee, Pam	02/01/2014	Boschee, Pam. 2014. Produced and Flowback Water Recycling and Reuse: Economics, Limitations, and Technology. (February).	Centralized Waste Treaters	6	No	No	CWT00242
1.1	EPA-HQ-OW-2015-0665-0691	Gradiant: Operations DCN CWT00247	Gradiant designed, built, and operates two 12,000 bpd plants in the Permian basin. Both treat produced and flowback waters.	Press Release, Public Announcement/Notice	Gradiant	01/01/2016	Gradiant. 2016. Gradiant: Operations. www.gradiant.com/operations.	Centralized Waste Treaters	1	No	No	CWT00247

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0707	CWT facilities operating in New York DCN CWT00259	Centralized Waste Treatment Facilities in New York.	Fact/Data Sheet				Centralized Waste Treaters	2	No	No	CWT00259
1.1	EPA-HQ-OW-2015-0665-1068	Water Resource Reporting and Water Footprint from Marcellus Shale Development in West Virginia and Pennsylvania - DCN CWT00336	This report documents water withdrawals, fluid injections, and waste recovery and disposal in West Virginia and Pennsylvania.	Publication; Copyrighted Material	Hansen; et al	10/30/2013	Hansen, E; Mulvaney, D; Betcher, M. 2013. Water Resource Reporting and Water Footprint from Marcellus Shale Development in WV and PA. (October 30).	Centralized Waste Treaters	88	No	Yes	CWT00336
1.1	EPA-HQ-OW-2015-0665-0974	Fracking & Associated Media Composition in Colorado - DCN CWT00338	A presentation on fracking and associated media composition in CO.	Publication; Copyrighted Material	Havics, Andrew	01/01/2011	Havics, Andrew, pH2, LLC/QEPA. 2011. Fracking & Associated Media Composition in Colorado	Centralized Waste Treaters	18	No	Yes	CWT00338

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.1	EPA-HQ-OW-2015-0665-0593	Produced Water Volumes and Management Practices in the United States - DCN CWT00358	Current estimate for the volume of produced water generated from oil and gas production in the United States. The volume estimate represents a compilation of data obtained from numerous state oil and gas agencies and several federal sources.	Report	Clark, C.E.; Veil, J.A.	09/01/2009	Clark, C.E.; Veil, J.A. 2009. Produced Water Volumes and Management Practices in the United States. ANL/EVS/R-09/1. Argonne National Laboratory.	Centralized Waste Treaters	65	No	No	CWT00358
1.1	EPA-HQ-OW-2015-0665-0652	Marcellus Shale Gas Development and Water Resource Issues DCN CWT00361	Presentation about water resource use and drilling processes in Marcellus	Report	Williams, John	06/28/2011	Williams, John. 2011. Marcellus Shale-Gas Development and Water-Resource Issues. USGS: New York Water Science Center.	Centralized Waste Treaters	23	No	No	CWT00361
1.1	EPA-HQ-OW-2015-0665-0653	The Marcellus Shale Gas Play: Geology, Development, and Water Resource Impact Mitigation - DCN CWT00362	This presentation describes the geology, development, and impact on water-resources of hydraulic fracturing in the Marcellus shale.	Meeting or Teleconference Materials	Williams, John		Williams, John. n.d. The Marcellus Shale Gas Play: Geology, Development, and Water-Resource Impact Mitigation. USGS: New York Water Science Center.	Centralized Waste Treaters	61	No	No	CWT00362



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.2	EPA-HQ-OW-2015-0665-0633	U.S. Geological Survey National Produced Waters Geochemical Database v2.1 (PROVISIONAL) - Documentation - DCN CWT00129	Documentation on USGS's national produced waters geochemical database v2.1 (provisional).	Report	U.S. Geological Survey (USGS)	10/16/2014	U.S. Geological Survey (USGS). 2014. National Produced Waters Geochemical Database v2.1 (Provisional) - Documentation.	Centralized Waste Treaters	15	No	No	CWT00129
1.2	EPA-HQ-OW-2015-0665-0686	Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM) Study Report Rev 1 - DCN CWT00131	Study of radioactivity exposure to workers who work with oil and gas extraction wastewater	Report	Pennsylvania Department of Environmental P	05/01/2016	PA DEP. 2016. Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM) Study Report. Rev 1.	Centralized Waste Treaters	200	No	No	CWT00131
1.2	EPA-HQ-OW-2015-0665-0686.01	APPENDIX A ADDITIONAL GEOLOGICAL INFORMATION - DCN CWT00131.A1	PA DEP TENORM Report Additional geological information for Marcellus shale and other shale formations in Pennsylvania. Includes rock formation sample analyses.	Report	Pennsylvania Department of Environmental P	05/01/2016	PA DEP. 2016. APPENDIX A ADDITIONAL GEOLOGICAL INFORMATION -GEOLOGY OF MARCELLUS SHALE ANDOTHER PENNSYLVANIA SHALE FORMATIONS.	Centralized Waste Treaters	14	No	No	CWT00131.A01

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.2	EPA-HQ-OW-2015-0665-0686.02	APPENDIX B FIELD INSTRUMENTATION QC DOCUMENTATION - DCN CWT00131.A2	PA DEP TENORM Report Field instrumentation quality control documentation.	Report	Pennsylvania Department of Environmental P	05/01/2016	PA DEP. 2015. APPENDIX B FIELD INSTRUMENTATION QC DOCUMENTATION.	Centralized Waste Treaters	54	No	No	CWT00131.A02
1.2	EPA-HQ-OW-2015-0665-0686.03	APPENDIX C GAMMA SPECTROSCOPY ANALYTICAL RESULTS - DCN CWT00131.A3	PA DEP TENORM Report Gamma spectroscopy analytical results for drill cuttings, proppant sand, flowback solids and fluids, produced waters, POTW solids and fluids, CWT effluent, ZLD solids and effluent, landfill leachate and bulking solids, and background.	Report	Pennsylvania Department of Environmental P	05/01/2016	PA DEP. 2016. APPENDIX C GAMMA SPECTROSCOPY ANALYTICAL RESULTS.	Centralized Waste Treaters	101	No	No	CWT00131.A03
1.2	EPA-HQ-OW-2015-0665-0686.04	APPENDIX D TOTAL AND REMOVABLE ALPHA/BETA SURFACE RADIOACTIVITY RESULTS - DCN CWT00131.A4	PA DEP TENORM Report Total and removable alpha/beta surface radioactivity results for well sites.	Report	Pennsylvania Department of Environmental P	05/01/2016	PA DEP. 2016. APPENDIX D TOTAL AND REMOVABLE ALPHA/BETA SURFACE RADIOACTIVITY RESULTS.	Centralized Waste Treaters	165	No	No	CWT00131.A04

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.2	EPA-HQ-OW-2015-0665-0686.05	APPENDIX E GROSS GAMMA RADIATION SURVEY FIGURES - DCN CWT00131.A5	PA DEP TENORM Report Gross gamma radiation survey figures for well sites.	Report	Pennsylvania Department of Environmental P	05/01/2016	PA DEP. 2016. APPENDIX E GROSS GAMMA RADIATION SURVEY FIGURES.	Centralized Waste Treaters	88	No	No	CWT00131.A05
1.2	EPA-HQ-OW-2015-0665-0686.06	APPENDIX F XRF ANALYTICAL ANALYSES RESULTS - DCN CWT00131.A6	PA DEP TENORM Report Solid and Liquid XRF analytical analysis results.	Report	Pennsylvania Department of Environmental P	05/01/2016	PA DEP. 2016. APPENDIX F XRF ANALYTICAL ANALYSES RESULTS.	Centralized Waste Treaters	41	No	No	CWT00131.A06
1.2	EPA-HQ-OW-2015-0665-0686.07	APPENDIX G T-TEST OUTPUT FILES - DCN CWT00131.A07	PA DEP TENORM Report T-test output files.	Report	Pennsylvania Department of Environmental P	05/01/2016	PA DEP. 2016. APPENDIX G T-TEST OUTPUT FILES.	Centralized Waste Treaters	30	No	No	CWT00131.A07

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.2	EPA-HQ-OW-2015-0665-0686.08	Appendix H Radon Monitor-Sample Analytical Analyses Reports - DCN CWT00131.A8	PA DEP TENORM Report Radon monitoring analytical analysis reports.	Report	Pennsylvania Department of Environmental P	05/01/2016	PA DEP. 2016. Appendix H Radon Monitor-Sample Analytical Analyses Reports.	Centralized Waste Treaters	159	No	No	CWT00131.A08
1.2	EPA-HQ-OW-2015-0665-0686.09	APPENDIX I FILTERED VERSUS UNFILTERED LIQUID SAMPLE COMPARISON - DCN CWT00131.A9	PA DEP TENORM Report Evaluation of the effects of laboratory filtering on sample activity for CWT, ZLD, POTW, and produced water samples from well sites.	Report	Pennsylvania Department of Environmental P	05/01/2016	PA DEP. 2016. APPENDIX I FILTERED VERSUS UNFILTERED LIQUID SAMPLE COMPARISON.	Centralized Waste Treaters	46	No	No	CWT00131.A09
1.2	EPA-HQ-OW-2015-0665-0686.10	APPENDIX J MICROSHIELD® OUTPUT FILES - DCN CWT00131.A10	PA DEP TENORM Report Microshield output files for the following scenarios: wastewater truck driver with 3,800 gallons at the DOT limit, solid waste roll-off at the DOT limit, and solid waste container on Day 1, 3, 10, 21, and 28.	Report	Pennsylvania Department of Environmental P	05/01/2016	PA DEP. 2016. APPENDIX J MICROSHIELD® OUTPUT FILES.	Centralized Waste Treaters	23	No	No	CWT00131.A10

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.2	EPA-HQ-OW-2015-0665-0686.11	Appendix K Laboratory Data Report - DCN CWT00131.A11	PA DEP TENORM Report Screen shot of the Appendix K Lab Data Report Screen for 2900-RE-DEP4478.	Report	Pennsylvania Department of Environmental P	05/01/2016	PA DEP. 2016. Appendix K Laboratory Data Report.	Centralized Waste Treaters	2	No	No	CWT00131.A11
1.2	EPA-HQ-OW-2015-0665-0686.12	APPENDIX L PEER REVIEW COMMENT AND RESOLUTION DOCUMENT - DCN CWT00131.A12	PA DEP TENORM Report Peer review comment and resolution table for the PA TENORM Study Report.	Report	Pennsylvania Department of Environmental P	05/01/2016	PA DEP. 2016. APPENDIX L PEER REVIEW COMMENT AND RESOLUTION DOCUMENT.	Centralized Waste Treaters	43	No	No	CWT00131.A12
1.2	EPA-HQ-OW-2015-0665-0686.13	Appendix M Non-Radiological Parameters - DCN CWT00131.A13	PA DEP TENORM Report Samples for various water quality parameters were collected from 44 different sources (44 data sets or samples). These sources were categorized as: hydraulic fracturing fluid, flowback water, production water, wastewater treatment inf	Report	Pennsylvania Department of Environmental P	05/01/2016	PA DEP. 2016. Appendix M Non-Radiological Parameters.	Centralized Waste Treaters	31	No	No	CWT00131.A13

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.2	EPA-HQ-OW-2015-0665-0567	Development Document for Interim Final Effluent Limitations Guidelines and Proposed New Source Performance Standards for the Oil and Gas Extraction Point Source Category - DCN CWT00134	This development document presents the findings of an extensive study	Publication; USEPA	U.S. EPA	09/01/1976	U.S. EPA. 1976. Development Document Interim Final ELG & Proposed New Source Performance Standards for Oil and Gas Extraction Point Source Category.	Centralized Waste Treaters	156	No	No	CWT00134
1.2	EPA-HQ-OW-2015-0665-0639	DOE Projects to Advance Environmental Science and Technology - DCN CWT00207	National Energy Technology Laboratory's (NETL) primary goal is to enhance the responsible development of domestic natural gas and oil resources that supply the country's energy	Meeting or Teleconference Materials	U.S. DOE	01/01/2013	United States Department of Energy (U.S. DOE). 2013. DOE Projects to Advance Environmental Science and Technology.	Centralized Waste Treaters	3	No	No	CWT00207
1.2	EPA-HQ-OW-2015-0665-0641	Flowback (Wastewater) from Hydraulic Fracturing - DCN CWT00210	An article on Ohio's 80,000 oil and gas wells and their completion process	Guidance, Interpretation, Policy, Procedure	Ohio DNR		Ohio Department of Natural Resources (Ohio DNR). Unknown. Flowback (Wastewater) from Hydraulic Fracturing. Accessed 28 April 2016.	Centralized Waste Treaters	1	No	No	CWT00210

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.2	EPA-HQ-OW-2015-0665-0648	Regulatory Flexibility Act Section 610 Review of Effluent Limitations Guidelines and Standards for the Centralized Waste Treatment Industry DCN CWT00222	Section 610 Review of Effluent Limitations Guidelines and Standards for the Centralized Waste Treatment Industry	Guidance, Interpretation, Policy, Procedure	U.S. EPA	01/01/2010	U.S. EPA. 2010. Regulatory Flexibility Act Section 610 Review of CWT ELGs and Standards	Centralized Waste Treaters	17	No	No	CWT00222
1.2	EPA-HQ-OW-2015-0665-0708	Final 2014 Effluent Guidelines Program Plan DCN CWT00261	Summary of EPA's review of effluent guidelines and pretreatment standards, identification of industrial categories selected for rulemakings, and categories selected for further review	Publication; USEPA	U.S. EPA	07/01/2015	U.S. EPA. 2015. Final 2014 Effluent Guidelines Program Plan. Available online at: <a href="http://www2.epa.gov/eg/effluent-guidelines-plan-2014">http://www2.epa.gov/eg/effluent-guidelines-plan-2014</a>	Centralized Waste Treaters	50	No	No	CWT00261
1.2	EPA-HQ-OW-2015-0665-0734	MAX Environmental Technologies Inc NPDES Permit DCN CWT00305	NPDES authorization to discharge treated fluids from the exploration, production, and development of oil and/or gas operations.	Permit, Registration	Pennsylvania Department of Environmental P	07/28/2004	PA DEP. 2004. MAX Environmental Technologies Inc NPDES Permit. PA0027715.	Centralized Waste Treaters	33	No	No	CWT00305

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.2	EPA-HQ-OW-2015-0665-0985	Revised Draft: Supplemental Generic Environmental Impact Statement (SGEIS) on the Oil, Gas, and Solution Mining Regulatory Program: Information Requests DCN CWT00349	Revised draft of the supplemental generic environmental impact statement on the oil, gas, and solution mining regulatory program.	Report	NYSDEC	09/07/2011	NYSDEC. 2011. Supplemental Generic Environmental Impact Statement (SGEIS) on the Oil, Gas, and Solution Mining Regulatory Program: Info Requests.	Centralized Waste Treaters	1537	No	No	CWT00349
1.3	EPA-HQ-OW-2015-0665-0528	Draft Toxic Weighting Factor Development in Support of CWA 304(m) Planning Process - DCN CWT00001	Discussion of the development of toxic weighting factors for pollutant to account for each pollutant having its own level of toxicity.	Report	ERG	07/29/2005	ERG. 2005. Draft Toxic Weighting Factor Development in Support of CWA 304(m) Planning Process. (July 29).	Centralized Waste Treaters	104	No	No	CWT00001
1.3	EPA-HQ-OW-2015-0665-0529	Coalbed Methane Extraction: Detailed Study Report - DCN CWT00002	This report summarizes the information collected and analyzed by the U.S. Environmental Protection Agency (EPA) as part of a study of the coalbed methane (CBM) extraction industry.	Publication; USEPA	U.S. EPA	12/01/2010	U.S. EPA. 2010. Coalbed Methane Extraction: Detailed Study Report. (December)	Centralized Waste Treaters	91	No	No	CWT00002



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0531	Cost Effective Recovery of Low-TDS Frac Flowback Water for Reuse - DCN CWT00005	Document about the possibility of using low TDS fracturing flowback water in a cost effective manner.	Report	Acharya, Harish R.; GE Global Research	06/01/2011	Acharya, Harish R. 2011. Cost Effective Recovery of Low-TDS Frac Flowback Water for Reuse. GE Global Research. U.S. DOE NETL.	Centralized Waste Treaters	100	No	No	CWT00005
1.3	EPA-HQ-OW-2015-0665-0532	Water-Related Issues Associated with Gas Production in the Marcellus Shale - DCN CWT00006	Report discusses additives use, flowback quality and quantity, regulations, on-site treatment, green technologies, alternate water sources, and water well testing.	Report	URS	03/25/2011	URS. 2011. Water-Related Issues Associated with Gas Production in the Marcellus Shale. (March)	Centralized Waste Treaters	126	No	No	CWT00006
1.3	EPA-HQ-OW-2015-0665-0533	Cabot Gas Well Treated with 100% Reused Frac Fluid - DCN CWT00007	A case study on treating wastewater onsite and reusing for fracturing without dilution.	Publication; Copyrighted Material	Papso, John; Blauch, Matt; Grottenthaler,	08/01/2010	Papso, John; Blauch, Matt; Grottenthaler, Dave. 2010. Cabot Gas Well Treated with 100% Reused Frac Fluid. Cabot Oil and Gas Corp. (August)	Centralized Waste Treaters	6	No	Yes	CWT00007

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0534	Water Reuse: An Integrated Approach to Managing the World's Water Resources. Chapter 9. Removal of Dissolved Constituents with Membranes - DCN CWT00008	A textbook chapter covering basic operation of reverse osmosis, electro dialysis, and evaporation. Specific information covered includes energy usage, design constraints, advantages, and disadvantages.	Publication; Copyrighted Material	Asano, Takashi	01/01/2007	Asano, T. 2007. Water Reuse: An Integrated Approach to Managing the World's Water Resources. Chap 9. Removal of Dissolved Constituents with Membranes.	Centralized Waste Treaters	64	No	Yes	CWT00008
1.3	EPA-HQ-OW-2015-0665-0535	Dewvaporation Desalination 5,000-Gallon-per-Day Pilot Plant - DCN CWT00009	A case study on a evaporation/distillation treatment technology for industrial wastewater treatment (10,000 to 45,000 mg/L TDS).	Publication; Other Governmental	Beckman, James	06/01/2008	Beckman, James. 2008. Dewvaporation Desalination 5,000-Gallon-per-Day Pilot Plant. U.S. Department of the Interior Bureau of Reclamation. (June).	Centralized Waste Treaters	87	No	No	CWT00009
1.3	EPA-HQ-OW-2015-0665-0541	Notes on Conference Call with Reserved Environmental Services, LLC, and Eastern Research Group, Inc. - DCN CWT00015	Notes taken on conference call between EPA, Reserved Environmental Services, LLC, and Eastern Research Group, Inc. The discussion included a description of Reserve's 100% recycling CWT plant for SGE operators.	Meeting/Teleconference Materials	ERG	02/01/2012	ERG. 2012. Notes on Conference Call with Reserved Environmental Services, LLC, and Eastern Research Group, Inc. (February 1).	Centralized Waste Treaters	8	No	No	CWT00015

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0543	Unconventional E&P \$8 Billion of US Water Services Market - DCN CWT00021	Online article on how water management issues in the U.S.'s exploration and production operation industry is resulting in \$8 billion in spending for water services.	Publication	Environmental Leader	11/11/2013	Environmental Leader. 2013. Unconventional E&P \$8 Billion of US Water Services Market. (November 11).	Centralized Waste Treaters	2	No	No	CWT00021
1.3	EPA-HQ-OW-2015-0665-0544	Study of the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources: Progress Report - DCN CWT00024	This report describes 18 research projects underway to answer key research questions and presents the progress made as of September 2012 for each of the projects.	Publication; USEPA	U.S. EPA	12/01/2012	U.S. EPA. 2012. Study of the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources: Progress Report. (December).	Centralized Waste Treaters	278	No	No	CWT00024
1.3	EPA-HQ-OW-2015-0665-0549	Notes on Conference Call with 212 Resources - DCN CWT00029	Notes taken on a conference call between EPA, 212 Resources, and Eastern Research Group, Inc. The discussion include details on 212 Resources evaporation technology.	Meeting/Teleconference Materials	ERG	01/09/2012	ERG. 2012. Notes on Conference Call with 212 Resources on 4 January 2012.	Centralized Waste Treaters	34	No	No	CWT00029

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0551	Innovative Water Management Strategies for Future Marcellus Development - DCN CWT00033	This presentation discusses a new treatment technology, offered by Epiphany Solar Water Systems, that crystallizes produced water directly at shale gas well using concentrated solar technology.	Meeting/Teleconference Materials	Pettengill, Ron	01/01/2012	Pettengill, Ron. 2012. Innovative Water Management Strategies for Future Marcellus Development. Epiphany Solar Systems.	Centralized Waste Treaters	12	No	No	CWT00033
1.3	EPA-HQ-OW-2015-0665-0552	Water Infrastructure Versus Mobile Options for Treating and Disposing Fracking and Produced Water - DCN CWT00034	This presentation summarizes the services provided by High Sierra Energy, a wastewater treatment service provider for shale gas operators.	Meeting/Teleconference Materials	Themaat, Johan	10/29/2012	Themaat, Johan. 2012. Water Infrastructure Versus Mobile Options for Treating and Disposing Fracking and Produced Water. High Sierra Water Services.	Centralized Waste Treaters	35	No	No	CWT00034
1.3	EPA-HQ-OW-2015-0665-0553	Site Visit Report US Gas Field Fluids Management (formerly Clean Streams) Marcellus Shale Gas Operation - DCN CWT00035	This site visit report provides an overview of EPA's site visit to Clean Streams located in Williamsport, PA. Clean Streams operates a CWT that utilizes evaporation/condensation to treat Marcellus shale wastewater.	Report	U.S. EPA	05/22/2014	U.S. EPA. 2014. Site Visit Report US Gas Field Fluids Management (formerly Clean Streams) Marcellus Shale Gas Operation. (May 22).	Centralized Waste Treaters	15	No	No	CWT00035

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0554	Site Visit Report Eureka Resources, LLC Marcellus Shale Gas Operations - DCN CWT00036	This site visit report summarizes information collected during EPA's site visit to Eureka Resources in Williamsport, PA. Eureka operates a CWT that utilizes evaporation/condensation to treat Marcellus wastewater and discharges to a local POTW.	Report	U.S. EPA	02/25/2012	U.S. EPA. 2012. Site Visit Report Eureka Resources, LLC Marcellus Shale Gas Operations. (February 25).	Centralized Waste Treaters	20	No	No	CWT00036
1.3	EPA-HQ-OW-2015-0665-0562	Site Visit Report Southwestern Energy Fayetteville Shale Operations - DCN CWT00046	A site visit report that summarizes Southwestern Energy's operations in the Fayetteville Shale play in Arkansas.	Report	U.S. EPA	03/30/2015	U.S. EPA. 2015. Site Visit Report Southwestern Energy Fayetteville Shale Operation (Sanitized).	Centralized Waste Treaters	34	No	No	CWT00046
1.3	EPA-HQ-OW-2015-0665-0596	Site Visit Report Seneca Resources Corporation - DCN CWT00054	Site visit report for Seneca Resources Corporation (Seneca Resources) and Heartland Technology Partners, LLC (Heartland Technology Partners).	Report	U.S. EPA	02/04/2015	U.S. EPA. 2015. Site Visit Report Seneca Resources Corporation, Covington, PA. (February 4).	Centralized Waste Treaters	19	No	No	CWT00054

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0606	Iodide, Bromide, and Ammonium in Hydraulic Fracturing and Oil and Gas Wastewaters: Environmental Implications - DCN CWT00069	The paper demonstrates that OGW from Marcellus and Fayetteville hydraulic fracturing flowback fluids and Appalachian conventional produced waters is characterized by high chloride, bromide, iodide (up to 56 mg/L), and ammonium (up to 420 mg/L).	Publication; Copyrighted Material	Jennifer Harkness, et al.	12/19/2014	Jennifer Harkness, et al. 2014. Iodide, Bromide, and Ammonium in Hydraulic Fracturing and Oil and Gas Wastewaters: Environmental Implications.	Centralized Waste Treaters	9	No	Yes	CWT00069
1.3	EPA-HQ-OW-2015-0665-0607	Impacts of Shale Gas Wastewater Disposal on Water Quality in Western Pennsylvania - DCN CWT00077	The safe disposal of liquid wastes associated with oil and gas production in the US is a major challenge given their large volumes and typically high levels of contaminants. In PA, oil and gas wastewater is sometimes treated at brine treatment facilities.	Publication; Copyrighted Material	Nathaniel Warner et al.	09/10/2013	Nathaniel Warner et al. 2013. Impacts of Shale Gas Wastewater Disposal on Water Quality in Western Pennsylvania. Duke University. (September 10).	Centralized Waste Treaters	9	No	Yes	CWT00077
1.3	EPA-HQ-OW-2015-0665-0620	An Integrated Water Treatment Technology Solution for Sustainable Water Resource Management in the Marcellus Shale - DCN CWT00102	The goal of this research was to provide an integrated approach aimed at addressing the increasing water resource challenges between natural gas production and other water stakeholders in shale gas basins.	Report	Matthew Bruff	06/30/2011	Matthew Bruff. 2011. An Integrated Water Treatment Technology Solution for Sustainable Water Resource Management in the Marcellus Shale.	Centralized Waste Treaters	295	No	Yes	CWT00102

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0621	The Economic Impact of the Value Chain of a Marcellus Shale Well - DCN CWT00103	The Economic Impact of the Value Chain of a Marcellus Shale Well Site examines the direct economic impact of a Marcellus Shale well located in Southwestern Pennsylvania. This study seeks to fill a critical information gap on the impact of gas drilling.	Economic Analysis	William E. Hefley	08/01/2011	William E. Hefley. 2011. The Economic Impact of the Value Chain of a Marcellus Shale Well. University of Pittsburgh. (August).	Centralized Waste Treaters	92	No	No	CWT00103
1.3	EPA-HQ-OW-2015-0665-0624	A Working Model for Oil and Gas Produced Water Treatment - DCN CWT00107	Presented at the Opportunities and Obstacles to Improving the Environmental Footprint of Energy Extraction in the Uintah Basin Workshop, October 14th 2010, Utah State University, Vernal, Utah.	Report	Shafer, Lee	10/14/2010	Lee Shafer. 2010. A Working Model for Oil and Gas Produced Water Treatment. Anticline Disposal LLC.	Centralized Waste Treaters	11	No	No	CWT00107
1.3	EPA-HQ-OW-2015-0665-0625	Water Recovery via Thermal Evaporative Processes For High Saline Frac Water Flowback - DCN CWT00108	To avoid the water related limitations and further the development of the nation's shale gas resources an economical process to recover and reuse water from hydrofracturing operations is required.	Study	Joseph Tinto, Robert Solomon	01/01/2010	Joseph Tinto, Robert Solomon. 2010. Water Recovery via Thermal Evaporative Processes For High Saline Frac Water Flowback. GE Water & Process Tech.	Centralized Waste Treaters	15	No	No	CWT00108

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0626	Engineering firm ventures into wastewater, LNG - DCN CWT00110	Over the past few years, several companies have announced moves to convert their drilling rigs and frack trucks to be able to run on natural gas and large industrial manufacturers of such equipment are starting to offer new designs amenable to LNG.	Publication	Anya Litvak	12/02/2014	Anya Litvak. 2014. Engineering firm ventures into wastewater, LNG. Pittsburgh PostGazette.	Centralized Waste Treaters	10	No	No	CWT00110
1.3	EPA-HQ-OW-2015-0665-0628	Vendor profile: 212 Resources - DCN CWT00112	212 Resources (originally H2Oil Recovery Services) initially specialized in the reclamation of salable crude oil and fresh water from oil exploration and production tank bottoms, skim oil and produced water delivered for disposal.	Fact/Data Sheet	212 Resources	01/01/2011	212 Resources. 2011. Vendor profile: 212 Resources. ALL Consulting .	Centralized Waste Treaters	1	No	No	CWT00112
1.3	EPA-HQ-OW-2015-0665-0629	Vendor Profile: Ecosphere Technologies, Inc - DCN CWT00113	Ecosphere is a water engineering and services company that offers three water treatment options for shale gas producers: Ozonix EcosFrac™, a process that is used prior to fracturing to remove bacteria to help reduce scaling and corrosion	Fact/Data Sheet	Ecosphere Technologies Inc.	01/01/2011	Ecosphere Technologies Inc. 2011. Vendor Profile: Ecosphere Technologies, Inc. ALL Consulting .	Centralized Waste Treaters	2	No	No	CWT00113



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0630	Determining the Minimum Treatment Levels Required for Production Efficiency: Stating the Lowest Acceptable Water Quality Levels for Effective Reuse in Fracs - DCN CWT00114	Technical presentation presented at 5th Annual Shale Play Water Management 2014 – Southern States Conference	Meeting or Teleconference Materials	Smith, Daniel	11/19/2014	Smith, Daniel. 2014. Determining the Minimum Treatment Levels Required for Production Efficiency. Apache.	Centralized Waste Treaters	20	No	No	CWT00114
1.3	EPA-HQ-OW-2015-0665-0565	Municipal Authority of the City of McKeesport Analysis of Gas Well Wastewaters as Required Under the PA DEP Administrative Order Dated October 23, 2008 (File 1) - DCN CWT00132	The analysis of gas well wastewaters performed by the Municipal Authority of the City of McKeesport as required under the PA DEP Administrative Order dated October 23, 2008.	Analysis	Rost, Joseph	08/12/2010	Rost, J. 2010. Municipal Authority of the City of McKeesport: Analysis of Gas Well Wastewaters as Required Under the PADEP Admin Order Dated 10/23/08.	Centralized Waste Treaters	28	No	No	CWT00132
1.3	EPA-HQ-OW-2015-0665-0566	Municipal Authority of the City of McKeesport Analysis of Gas Well Wastewaters as Required Under the PA DEP Administrative Order Dated October 23, 2008 (File 2) - DCN CWT00133	City of McKeesport analysis results of gas well wastewaters.	Analysis	Rost, Joseph	11/29/2010	Rost, J. 2010. Municipal Authority of the City of McKeesport: Analysis of Gas Well Wastewaters as Required Under the PA DEP AO Dated October 23, 2008.	Centralized Waste Treaters	32	No	No	CWT00133

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0571	Underground Injection Wells for Produced Water Disposal - DCN CWT00146	A presentation on underground injection wells for produced water disposal.	Meeting or Teleconference Materials	McCurdy, Rick	03/29/2011	McCurdy, Rick. Underground Injection Wells for Produced Water Disposal. Chesapeake Energy Corp.	Centralized Waste Treaters	28	No	No	CWT00146
1.3	EPA-HQ-OW-2015-0665-0573	Produced Water in the Western United States: Geographical Distribution, Occurrence, and Composition - DCN CWT00149	Coproduced water is a byproduct of oil and natural gas production. Because it is in contact with hydrocarbon products and geologic formations in underground basins, it usually contains elevated concentrations of inorganic and organic constituents.	Publication; Other Governmental	Benko, K.L. and Drewes, J.E.	11/02/2008	Benko, K.L. and Drewes, J.E. 2008. Produced Water in the Western US: Geographical Distribution, Occurrence, and Composition. US Bureau of Reclamation.	Centralized Waste Treaters	8	No	No	CWT00149
1.3	EPA-HQ-OW-2015-0665-0582	An Integrated Framework for Treatment and Management of Produced Water - DCN CWT00188	A technical assessment of produced water treatment technologies and its management	Analysis	Colorado School of Mines (CSM)	11/01/2009	Colorado School of Mines (CSM). 2009. An Integrated Framework for Treatment and Management of Produced Water, 1st edition (November)	Centralized Waste Treaters	158	No	No	CWT00188

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0584	Sequential Precipitation - Fractional Crystallization Treatment of Marcellus Shale Flowback and Production Wastewaters - DCN CWT00192	By 2016 development of the Marcellus shale gas play in the Northeast will generate an estimated 60 million gallons per day of hydrofracture flowback and production wastewater.	Report	Timothy Keister, James Sleigh, and Megan B	01/01/2012	Keister, Timothy. 2012. Sequential Precipitation - Fractional Crystallization Treatment of Marcellus Shale Flowback and Production Wastewaters.	Centralized Waste Treaters	9	No	No	CWT00192
1.3	EPA-HQ-OW-2015-0665-0585	PURON® HOLLOW FIBER MODULES - DCN CWT00193	Vendor profile for the Puron hollow fiber modules from Koch Membrane Systems	Fact/Data Sheet	Koch Membrane Systems	01/01/2015	Koch Membrane Systems. 2015. Vendor Profile: PURON® HOLLOW FIBER MODULES.	Centralized Waste Treaters	1	No	No	CWT00193
1.3	EPA-HQ-OW-2015-0665-0586	Kubota Submerged Membrane Unit®. - DCN CWT00194	Vendor Profile for Kubota Submerged Membrane Unit® by KUBOTA Corporation. 2015.	Fact/Data Sheet	KUBOTA Corporation	01/01/2015	KUBOTA Corporation. 2015. Vendor Profile: Kubota Submerged Membrane Unit®.	Centralized Waste Treaters	6	No	No	CWT00194

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1.3	EPA-HQ-OW-2015-0665-0587	Performance evaluation of a submerged membrane bioreactor for the treatment of brackish oil and natural gas field produced water - DCN CWT00195	Produced water, which is co-produced during oil and gas manufacturing, represents one of the largest sources of oily wastewaters. Therefore, treatment of this produced water may improve the economic viability and lead to a new source of water for benefici	Analysis	Kose, Borte; et al	01/01/2012	Kose, Borte; et al. 2012. Performance evaluation of a submerged membrane bioreactor for the treatment of brackish oil and natural gas water	Centralized Waste Treaters	3	No	No	CWT00195
1.3	EPA-HQ-OW-2015-0665-0635	Biological Wastewater Treatment - DCN CWT00196	This article briefly discusses the differences between aerobic and anaerobic biological treatment processes and subsequently focuses on select aerobic biological treatment processes/technologies.	Publication; Copyrighted Material	Arun Mittal	01/01/2011	Mittal, Arun. 2011. Biological Wastewater Treatment. Water Today. Available online at: <a href="http://www.watertoday.org/Article%20Archieve/Aquatech%2012.pdf">http://www.watertoday.org/Article%20Archieve/Aquatech%2012.pdf</a>	Centralized Waste Treaters	8	No	No	CWT00196
1.3	EPA-HQ-OW-2015-0665-0636	Membrane Bioreator as an Advanced Wastewater Treatment Technology - DCN CWT00197	In this chapter, the authors have covered several aspects of MBR, with an exhaustive overview of its operational and biological performance.	Publication; Copyrighted Material	Radjenovic, Matosic, Mijatovic, Petrovic,	11/06/2007	Radjenovic, Matosic, Mijatovic, Petrovic, and Barcelo. 2008. Membrane Bioreator as an Advanced Wastewater Treatment Technology	Centralized Waste Treaters	66	No	No	CWT00197

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1.3	EPA-HQ-OW-2015-0665-0637	Membrane Bioreactors for Industrial Wastewater Treatment: Applicability and Selection of Optimal System Configuration - DCN CWT00199	This article explains the applicability and selection of most suitable system configurations for a membrane bioreactor	Publication; Copyrighted Material	Sutton, Paul M.	01/01/2006	Sutton, Paul M. 2006. Membrane Bioreactors for Industrial Wastewater Treatment: Applicability and Selection of Optimal System Configuration.	Centralized Waste Treaters	16	No	No	CWT00199
1.3	EPA-HQ-OW-2015-0665-0640	Considerations for development of Marcellus Shale gas - DCN CWT00209	An article on efforts of the operators working to optimize fracture patterns for improved production and to ensure containment and efficient use of frac fluids.	Report	J. Daniel Arthur, Brian Bohm and Mark Layn	01/01/2009	Arthur, Daniel J., Brian Bohm, and Mark Layne. 2009. Considerations for development of Marcellus Shale gas. World Oil. July 2009. ALL Consulting.	Centralized Waste Treaters	4	No	No	CWT00209
1.3	EPA-HQ-OW-2015-0665-0642	Unconventional Oil and Gas Production Drives Trends in Water Management and Treatment - DCN CWT00211	This article explores the outlook for the global market and gives insight into technology trends and the regions that hold the biggest opportunities for water treatment.	Report	Jelena Stanic	07/14/2014	Stanic, Jelena. Unconventional Oil and Gas Production Drives Trends in Water Management and Treatment. Oil and Gas Facilities	Centralized Waste Treaters	14	No	No	CWT00211

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1.3	EPA-HQ-OW-2015-0665-0643	Reasonable Foreseeable Development Scenario for Oil and Gas Buffalo Field Office Planning Area, Wyoming - DCN CWT00212	An analysis makes a base line projection that assumes future conventional oil and gas and coalbed natural gas related activity levels on all assessed lands within the Study Area	Report	Still, Dean P., Alfred M. Elser, and Fred	08/16/2012	Still, Dean P., et al. 2012. Reasonable Foreseeable Development Scenario for Oil and Gas Buffalo Field Office Planning Area, Wyoming	Centralized Waste Treaters	163	No	No	CWT00212
1.3	EPA-HQ-OW-2015-0665-0692	Frac Water Reuse Technologies DCN CWT00248	The development of technology to recycle and reuse this water is now becoming critical and Anguil Aqua has integrated solutions to help.	Press Release, Public Announcement/Notice	Anguil Aqua Systems	01/01/2016	Anguil Aqua Systems. 2016. Frac Water Reuse Technologies.	Centralized Waste Treaters	2	No	No	CWT00248
1.3	EPA-HQ-OW-2015-0665-0693	6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference Notes DCN CWT00249	Notes on the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference	Meeting Materials	ERG	01/01/2016	ERG. 2016. 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference Notes.	Centralized Waste Treaters	38	No	No	CWT00249

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0693.01	CONSOL Energy DCN CWT00249.A01	Presentation at the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference	Meeting Materials	Robert, Marshall	03/30/2016	Robert, Marshall. 2016. CONSOL Energy.	Centralized Waste Treaters	26	No	No	CWT00249.A01
1.3	EPA-HQ-OW-2015-0665-0693.02	How do we manage water use, reuse, recycling & disposal when we don't have any money? DCN CWT00249.A02	Presentation at the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference	Meeting Materials	Biehl, Eddy	03/30/2016	Biehl, Eddy. 2016. How do we manage water use, reuse, recycling & disposal when we don't have any money. Stonebridge Operating Co., LLC.	Centralized Waste Treaters	18	No	No	CWT00249.A02
1.3	EPA-HQ-OW-2015-0665-0693.03	Treatment of Produced Water to Discharge Quality: A North American Case Study DCN CWT00249.A03	Presentation at the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference	Meeting Materials	Nagghappan, L.	03/30/2016	Nagghappan, L. 2016. Treatment of Produced Water to Discharge Quality: A North American Case Study. Veolia.	Centralized Waste Treaters	14	No	No	CWT00249.A03

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0693.04	The Water Exchange for the Energy Ecosystem DCN CWT00249.A04	Presentation at the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference	Meeting Materials	Adler, Josh	03/30/2016	Adler, Josh. 2016. The Water Exchange for the Energy Ecosystem. Sourcewater.	Centralized Waste Treaters	27	No	No	CWT00249.A04
1.3	EPA-HQ-OW-2015-0665-0693.05	Pennsylvania – Long Term Water Management: the need for long term water outlets DCN CWT00249.A05	Presentation at the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference	Meeting Materials	Anadarko Petroleum Corporation	03/30/2016	Anadarko Petroleum Corporation. 2016. Pennsylvania – Long Term Water Management: the need for long term water outlets.	Centralized Waste Treaters	26	No	No	CWT00249.A05
1.3	EPA-HQ-OW-2015-0665-0693.06	Mobile vs. Centralized Treatment DCN CWT00249.A06	Presentation at the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference	Meeting Materials	Patton, Mark	03/30/2016	Patton, Mark. 2016. Mobile vs. Centralized Treatment. Hydrozonix.	Centralized Waste Treaters	26	No	No	CWT00249.A06



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0693.07	EVAPORATION CONSIDERATIONS: Significant Reduction of Evaporation for a Variety of Applications DCN CWT00249.A07	Presentation at the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference	Meeting Materials	Cameron, Ian	03/30/2016	Cameron, Ian. 2016. EVAPORATION CONSIDERATIONS: Significant Reduction of Evaporation for a Variety of Applications. Regen.	Centralized Waste Treaters	16	No	No	CWT00249.A07
1.3	EPA-HQ-OW-2015-0665-0693.08	EVAPORATION & CRYSTALLIZATION DCN CWT00249.A08	Presentation at the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference	Meeting Materials	Kalt, Brian	03/30/2016	Kalt, Brian. 2016. EVAPORATION & CRYSTALLIZATION. Fairmont Brine Processing.	Centralized Waste Treaters	3	No	No	CWT00249.A08
1.3	EPA-HQ-OW-2015-0665-0693.09	PA TENORM Study, Regulatory Framework & Waste Management DCN CWT00249.A09	Presentation at the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference. Presented by Jason Hubler.	Meeting Materials	Allard, Dave and Lombard, Andy	03/31/2016	Allard, Dave and Lombard, Andy. 2016. PA TENORM Study, Regulatory Framework & Waste Management. PA DEP.	Centralized Waste Treaters	62	No	No	CWT00249.A09

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0693.10	Reusing Marcellus Water in Utica Wells DCN CWT00249.A10	Presentation at the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference	Meeting Materials	Tucker, Yael	03/30/2016	Tucker, Yael. 2016. Reusing Marcellus Water in Utica Wells. DOE. NETL.	Centralized Waste Treaters	18	No	No	CWT00249.A10
1.3	EPA-HQ-OW-2015-0665-0693.11	Appalachian Shale Energy Produced Fluids Management and UIC Well Disposal Trends DCN CWT00249.A11	Presentation at the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference	Meeting Materials	Yoxtheimer, David	03/30/2016	Yoxtheimer, David. 2016. Appalachian Shale Energy Produced Fluids Management and UIC Well Disposal Trends. Penn State University.	Centralized Waste Treaters	20	No	No	CWT00249.A11
1.3	EPA-HQ-OW-2015-0665-0693.12	Summary of Day #1 DCN CWT00249.A12	Presentation at the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference	Meeting Materials	Cameron, Ian	03/31/2016	Cameron, Ian. 2016. Summary of Day #1. 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference.	Centralized Waste Treaters	6	No	No	CWT00249.A12

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0693.13	Mitigating Injection-Induced Seismicity DCN CWT00249.A13	Presentation at the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference	Meeting Materials	Bates, William	03/28/2016	Bates, William. 2016. Mitigating Injection-Induced Seismicity. US EPA. OGWDW.	Centralized Waste Treaters	34	No	No	CWT00249.A13
1.3	EPA-HQ-OW-2015-0665-0693.14	How Injection Wells Are Being Cost-Effectively Constructed, Implemented And Operated Within State Regulations And Ensuring Seismic Events Are Mitigated DCN CWT00249.A14	Presentation at the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference	Meeting Materials	Cameron, Ian	03/31/2016	Cameron, Ian. 2016. How Injection Wells Are Being Cost-Effectively Constructed & Operated w/in State Regs & Ensuring Seismic Events Are Mitigated.	Centralized Waste Treaters	2	No	No	CWT00249.A14
1.3	EPA-HQ-OW-2015-0665-0693.15	WATER MANAGEMENT: HOLISTIC APPROACH DCN CWT00249.A15	Presentation at the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference	Meeting Materials	Fernley, Amanda	03/31/2016	Fernley, Amanda. 2016. WATER MANAGEMENT: HOLISTIC APPROACH. Antero Resources.	Centralized Waste Treaters	7	No	No	CWT00249.A15

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0693.16	Hearing Updates From Regulatory Bodies For Marcellus And Utica On How Regulations Will Affect The Use Of Surface Water For Disposal And Water Sourcing DCN CWT00249.A16	Presentation at the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference	Meeting Materials	Dehoff, Andrew	03/31/2016	Dehoff, A. 2016. Hearing Updates From Reg Bodies For Marcellus & Utica On How Regs Will Affect The Use Of Surface Water For Disposal & Water Sourcing.	Centralized Waste Treaters	16	No	No	CWT00249.A16
1.3	EPA-HQ-OW-2015-0665-0693.17	Brine Transfer Line Integrity: Temporary & permanent line installation & testing alternatives DCN CWT00249.A17	Presentation at the 6th Annual Shale Plays Water Management Marcellus and Utica 2016 Conference	Meeting Materials	Biehl, Eddy	03/31/2016	Biehl, Eddy. 2016. Brine Transfer Line Integrity: Temporary & permanent line installation & testing alternatives. Stonebridge Operating Co., LLC.	Centralized Waste Treaters	23	No	No	CWT00249.A17
1.3	EPA-HQ-OW-2015-0665-0695	Pretreatment regulated CWT facilities in Arkansas from the Arkansas Department of Environmental Quality DCN CWT00254	ADEQ list of pretreatment regulated CWT facilities found online at: <a href="http://www2.adeq.state.ar.us/water/branch_permits/individual_permits/pretreatment/industrial_users.aspx#Search">http://www2.adeq.state.ar.us/water/branch_permits/individual_permits/pretreatment/industrial_users.aspx#Search</a>	Fact/Data Sheet	Arkansas DEQ	01/01/2014	Arkansas DEQ. 2014. Pretreatment regulated CWT facilities in Arkansas from the Arkansas Department of Environmental Quality.	Centralized Waste Treaters	4	No	No	CWT00254

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0706	MPDES Individual Permits DCN CWT00258	An MPDES General Permit is a pre-existing permit for wastewater discharges associated with common activities, such as concentrated animal feeding operations and storm water discharges from construction or industrial activity.	Fact/Data Sheet	Montana DEQ	03/16/2017	Montana DEQ. 207. MPDES Individual Permits. Available online at: <a href="http://deq.mt.gov/Water/WPB/mpdes/majorpermits">http://deq.mt.gov/Water/WPB/mpdes/majorpermits</a>	Centralized Waste Treaters	19	No	No	CWT00258
1.3	EPA-HQ-OW-2015-0665-0709	Enforcement and Compliance History Online DCN CWT00262	Use EPA's Enforcement and Compliance History Online website to search for facilities in your community to assess their compliance with environmental regulations.	Fact/Data Sheet	U.S. EPA	01/01/2017	U.S. EPA. 2017. Enforcement and Compliance History Online. <a href="https://echo.epa.gov/">https://echo.epa.gov/</a>	Centralized Waste Treaters	2	No	No	CWT00262
1.3	EPA-HQ-OW-2015-0665-0966	Envirofacts Database DCN CWT00263	Retrieve information from multiple sources of Envirofacts' System Data for your area of interest.	Fact/Data Sheet	U.S. EPA	01/01/2017	U.S. EPA. 2017. Envirofacts Database. <a href="https://www3.epa.gov/enviro/">https://www3.epa.gov/enviro/</a>	Centralized Waste Treaters	3	No	No	CWT00263

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.3	EPA-HQ-OW-2015-0665-0732	The Water-Energy Nexus: Challenges and Opportunities DCN CWT00294	This nexus report frames an integrated challenge and opportunity space around the water-energy nexus.	Publication; Other Governmental	U.S. DOE	06/01/2014	United States Department of Energy (U.S. DOE). 2014. The Water-Energy Nexus: Challenges and Opportunities.	Centralized Waste Treaters	258	No	No	CWT00294
1.3	EPA-HQ-OW-2015-0665-1112	Analysis of Hydraulic Fracturing Fluid Data from the FracFocus Chemical Disclosure Registry 1.0 - DCN CWT00328	Report evaluating hydraulic fracturing fluid data reported in the FracFocus Registry. Includes discussion of methodology for extracting and analyzing the data and presents results of data on base fluids, proppants, and chemicals.	Publication; USEPA	U.S. EPA	03/01/2015	U.S. EPA. 2015. Analysis of Hydraulic Fracturing Fluid Data from the FracFocus Chemical Disclosure Registry 1.0. (March).	Centralized Waste Treaters	168	No	No	CWT00328
1.3	EPA-HQ-OW-2015-0665-1113	Hydraulic Fracturing Fluid DCN CWT00329	List of fracking chemicals	Publication; Copyrighted Material	Exxon Mobil Corporation	01/01/2014	ExxonMobil Corporation. 2014. Hydraulic Fracturing Fluid. XTO Energy. Downloaded on 6/13/2014.	Centralized Waste Treaters	4	No	Yes	CWT00329

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1.3	EPA-HQ-OW-2015-0665-1065	An Investigation of Naturally Occurring Radioactive Materials (NORM) in Oil and Gas Wells in New York State. NYSDEC DCN CWT00949	Investigation report of naturally occurring radioactive materials (NORM) in oil and gas wells in New York State. Report includes background and procedures for selecting sampling and survey locations, a presentation and analysis of results, and discussion.	Report	NYSDEC	04/01/1999	NYSDEC. 1999. An Investigation of Naturally Occurring Radioactive Materials (NORM) in Oil and Gas Wells in New York State. DEC Publication.	Centralized Waste Treaters	86	No	No	CWT00333
1.3	EPA-HQ-OW-2015-0665-1066	Composition and Properties of Drilling and Completion Fluids. 6th edition DCN CWT00334	Composition and Properties of Drilling and Completion Fluids, Sixth Edition.	Publication; Copyrighted Material	Caen, R., Darley, H.C.H., and G. R. Gray.	01/01/2011	Caen, R., Darley, et al. 2011. Composition and Properties of Drilling and Completion Fluids. 6th edition. Gulf Professional Publishing: Waltham, MA.	Centralized Waste Treaters	696	No	Yes	CWT00334
1.3	EPA-HQ-OW-2015-0665-1067	Evaluation of Potential Impacts of Hydraulic Fracturing Flowback Fluid Additives on Microbial Processes in Publicly-Owned Treatment Works (POTWs) DCN CWT00335	This document analyzes the potential effects of discharging Marcellus flowback to a POTW.	Report	Gradient	12/31/2009	Gradient. 2009. Evaluation of Potential Impacts of Hydraulic Fracturing Flowback Fluid Additives on Microbial Processes in POTWs	Centralized Waste Treaters	12	No	No	CWT00335

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1.3	EPA-HQ-OW-2015-0665-0977	Uinta Water Management DCN CWT00341	PowerPoint presentation from Water Management for Shale Plays Conference (May 2014) about Uinta water management practices.	Meeting or Teleconference Materials	Johnson, Tommy and Harry, David	05/28/2014	Johnson, Tommy and Harry, David. 2014. Uinta Water Management. Water Management for Shale Plays Conference. (May 28).	Centralized Waste Treaters	28	No	No	CWT00341
1.3	EPA-HQ-OW-2015-0665-0978	Key Considerations for Frac Flowback / Produced Water Reuse and Treatment DCN CWT00342	This presentation provides TDS concentrations for various shale plays around the country.	Meeting or Teleconference Materials	Kimball, Robert	05/01/2012	Robert Kimball. 2012. Key Considerations for Frac Flowback / Produced Water Reuse and Treatment. CDM Smith.	Centralized Waste Treaters	44	No	No	CWT00342
1.3	EPA-HQ-OW-2015-0665-0981	Produced Water Reuse and Recycling Challenges and Opportunities Across Major Shale Plays DCN CWT00345	A presentation on produced water reuse and recycling challenges and opportunities across major shale plays.	Meeting or Teleconference Materials	Mantell, Matthew	03/29/2011	Mantell, Matthew, Chesapeake Energy Corp. 2011. Produced Water Reuse and Recycling Challenges and Opportunities Across Major Shale Plays	Centralized Waste Treaters	40	No	No	CWT00345



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1.3	EPA-HQ-OW-2015-0665-0591	Bakken Water Opportunities Assessment - Phase 1 - DCN CWT00356	This report describes wastewater volumes, wastewater characteristics, and wastewater management in the Bakken shale play.	Letter	Stepan, Daniel et al.	04/01/2010	Stepan, D.J., et. al. 2010. Bakken Water Opportunities Assessment - Phase 1. Energy & Env Research Cntr, Univ of ND. Prepared for Nat'l Energy Tech Lab	Centralized Waste Treaters	57	No	No	CWT00356
1.3	EPA-HQ-OW-2015-0665-0592	Mid-Continent Water Management for Stimulation Operations - DCN CWT00357	A presentation on mid-continent water management for stimulation operations.	Press Release, Public Announcement/Notice	Tipton, Steven	03/30/2011	Tipton, Steven, Newfield Exploration. 2011. Mid-Continent Water Management for Stimulation Operations	Centralized Waste Treaters	25	No	No	CWT00357
1.3	EPA-HQ-OW-2015-0665-0650	Contaminant Characterization of Effluent from PA Brine Treatment Josephine Facility DCN CWT00359	A study on the contaminant characterization of effluent from PA Brine Treatment Inc., Josephine Facility that is being released into Blacklick Creek in Indiana County, PA.	Report	Volz, Conrad; Ferrar, Kyle; Michanowicz, D	03/25/2011	Volz, Conrad; Ferrar, Kyle; Michanowicz, Drew et. al. 2011. Contaminant Characterization of Effluent from PA Brine Treatment Josephine Facility	Centralized Waste Treaters	118	No	No	CWT00359

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1.3	EPA-HQ-OW-2015-0665-0656	Water Quality Literature Review and Field Monitoring of Active Shale Gas Wells. Phase I: Assessing Environmental Impacts of Horizontal Gas Well Drilling Operations DCN CWT0365	WV DEP Final Report on the water quality literature review and field monitoring of active shale gas wells. Includes results of the literature review, water and waste stream monitoring including the plan, data analysis, and results.	Report	Ziemkiewicz, Paul	02/15/2013	Ziemkiewicz, P. 2013. Water Quality Literature Review and Field Monitoring of Active Shale Gas Wells. (February 15).	Centralized Waste Treaters	141	No	No	CWT00365
1.4	EPA-HQ-OW-2015-0665-0689	Public Comment EPA-HQ-OW-2014-0598-0969: Letter to Lisa Biddle DCN CWT00245	A letter to Lisa Biddle through the public submission of comments on the Proposed ELG Rulemaking.	Letter	Meyer, Stanley	07/16/2015	Meyer, Stanley. 2015. Public Comment EPA-HQ-OW-2014-0598-0969: Letter to Lisa Biddle. JS Meyer Engineering.	Centralized Waste Treaters	2	No	No	CWT00245
1.4	EPA-HQ-OW-2015-0665-0689.1	Public Comment EPA-HQ-OW-2014-0598-0969: Oil and Gas Frack, Produced Flowback Water Processing Technology DCN CWT00245.A01	Technology presentation submitted through public comments on the Proposed ELG Rulemaking.	Fact/Data Sheet	JS Meyer Engineering	07/21/2015	JS Meyer Engineering. 2015. Public Comment EPA-HQ-OW-2014-0598-0969: Oil and Gas Frack, Produced Flowback Water Processing Technology.	Centralized Waste Treaters	23	No	No	CWT00245.A1

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1.4	EPA-HQ-OW-2015-0665-0738	Anticline Disposal DCN CWT00276	A summary of Anticline Disposal.	Publication; Copyrighted Material	Sublette Examiner	09/25/2003	Sublette Examiner. 2003. Anticline Disposal. Volume 3, Number 26. <a href="http://www.sublette.com/examiner/v3n26/v3n26s5.htm">http://www.sublette.com/examiner/v3n26/v3n26s5.htm</a> .	Centralized Waste Treaters	2	No	Yes	CWT00276
1.4	EPA-HQ-OW-2015-0665-0739	List of Waste Disposal Costs DCN CWT00277	Website for the PennWell Corporation with lists of waste disposal costs; accessed in June-July 2014.	Fact/Data Sheet	PennWell	06/01/2014	PennWell. 2014. List of Waste Disposal Costs.	Centralized Waste Treaters	2	No	No	CWT00277
1.4	EPA-HQ-OW-2015-0665-0740	Facility Detail: Dishon Disposal, Inc. DCN CWT00278	Website for CHWMEG, Inc. with facility details for Dishon Disposal, Inc; accessed in June-July 2014.	Publication; Copyrighted Material	CHWMEG, Inc.	05/11/2017	CHWMEG, Inc. 2017. Facility Detail: Dishon Disposal, Inc. <a href="http://www.chwmegeg.org/asp/search/detail.asp?ID=10357">http://www.chwmegeg.org/asp/search/detail.asp?ID=10357</a> .	Centralized Waste Treaters	2	No	Yes	CWT00278

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.4	EPA-HQ-OW-2015-0665-0741	Administrative Order for Compliance on Consent EPA Docket No.: CWA-03-2013-0051DN DCN CWT00279	Administrative Order for Compliance on ConsentEPA Docket No.: CWA-03-2013-0051DN	Order	U.S. EPA Region 3	05/08/2013	U.S. EPA Region 3. 2013. Administrative Order for Compliance on Consent EPA Docket No.: CWA-03-2013-0051DN.	Centralized Waste Treaters	14	No	No	CWT00279
1.4	EPA-HQ-OW-2015-0665-0716	Desalination of Oilfield-Produced Water at the San Ardo Water Reclamation Facility, CA DCN CWT00280	Paper discussing the successful application of reverse osmosis membranes.	Publication; Copyrighted Material	Webb, Charles	03/24/2009	Webb, Charles. 2009. Desalination of Oilfield-Produced Water at the San Ardo Water Reclamation Facility, CA. Society of Petroleum Engineers.SPE1 21520.	Centralized Waste Treaters	21	No	Yes	CWT00280
1.4	EPA-HQ-OW-2015-0665-0717	Envirofacts DCN CWT00281	Retrieve information from multiple sources of Envirofacts' System Data for your area of interest.	Publication; USEPA	U.S. EPA	05/11/2017	U.S. EPA. 2017. Envirofacts. <a href="https://www3.epa.gov/enviro/">https://www3.epa.gov/enviro/</a> .	Centralized Waste Treaters	2	No	No	CWT00281

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1.4	EPA-HQ-OW-2015-0665-0718	Desalinating Produced Water for Beneficial Reuse DCN CWT00282	<a href="http://www.waterworld.com/articles/iww/print/volume-11/issue-2/feature-editorial/desalinating-produced-water-for-beneficial-re-use.html">http://www.waterworld.com/articles/iww/print/volume-11/issue-2/feature-editorial/desalinating-produced-water-for-beneficial-re-use.html</a>	Press Release, Public Announcement/Notice	Lnsn Nagghappan	05/11/2017	Lnsn Nagghappan. 2017. Desalinating Produced Water for Beneficial Reuse. Industrial WaterWorld.	Centralized Waste Treaters	5	No	No	CWT00282
1.4	EPA-HQ-OW-2015-0665-0719	Williams Fork, Piceance Basin: Flowback Water Reuse – Quality and Quantity DCN CWT00283	<a href="http://www2.epa.gov/sites/production/files/documents/piceance_reuse.pdf">http://www2.epa.gov/sites/production/files/documents/piceance_reuse.pdf</a>	Fact/Data Sheet	Jill E. Cooper	03/30/2011	Jill E. Cooper. 2011. Williams Fork, Piceance Basin: Flowback Water Reuse – Quality and Quantity. Encana Oil & Gas (USA) Inc.	Centralized Waste Treaters	17	No	No	CWT00283
1.4	EPA-HQ-OW-2015-0665-0720	New digs: Halliburton officially opens expanded Fort Lupton facility DCN CWT00284	<a href="http://www.ftluptonpress.com/content/new-digs-halliburton-officially-opens-expanded-fort-lupton-facility">http://www.ftluptonpress.com/content/new-digs-halliburton-officially-opens-expanded-fort-lupton-facility</a>	Press Release, Public Announcement/Notice	Gene Sears	05/29/2013	Gene Sears. 2013. New digs: Halliburton officially opens expanded Fort Lupton facility. Fort Lupton Press.	Centralized Waste Treaters	1	No	No	CWT00284

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.4	EPA-HQ-OW-2015-0665-0721	Waste Management Plan DCN CWT00285	<a href="http://www.adeq.state.ar.us/ftproot/Pub/WebDatabases/PermitsOnline/NPDES/PermitInformation/5139-W_Waste%20Management%20and%20Closure%20Plans_20111214.pdf">http://www.adeq.state.ar.us/ftproot/Pub/WebDatabases/PermitsOnline/NPDES/PermitInformation/5139-W_Waste%20Management%20and%20Closure%20Plans_20111214.pdf</a>	Fact/Data Sheet	Southwestern Energy, Inc.	09/01/2011	Southwestern Energy, Inc. 2011. Waste Management Plan.	Centralized Waste Treaters	38	No	No	CWT00285
1.4	EPA-HQ-OW-2015-0665-0725	AR0052175 Public Notice of Draft Permit DCN CWT00286	<a href="http://www.adeq.state.ar.us/ftproot/Pub/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0052175_PN%20of%20Draft%20to%20Petit%20Jean%20Country%20Headlight_20121220.pdf">http://www.adeq.state.ar.us/ftproot/Pub/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0052175_PN%20of%20Draft%20to%20Petit%20Jean%20Country%20Headlight_20121220.pdf</a>	E-mail	Scott Waller	12/20/2012	Scott Waller. 2012. AR0052175 Public Notice of Draft Permit. Arkansas Department of Environmental Quality.	Centralized Waste Treaters	3	No	No	CWT00286
1.4	EPA-HQ-OW-2015-0665-0726	First-Of-Its-Kind Desalination Plant Unveiled In Texas DCN CWT00287	<a href="http://www.wateronline.com/doc/first-of-its-kind-desalination-plant-unveiled-in-texas-0001">http://www.wateronline.com/doc/first-of-its-kind-desalination-plant-unveiled-in-texas-0001</a>	Press Release, Public Announcement/Notice	Sara Jerome	06/30/2014	Sara Jerome. 2014. First-Of-Its-Kind Desalination Plant Unveiled In Texas. Water Online.	Centralized Waste Treaters	1	No	No	CWT00287

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1.4	EPA-HQ-OW-2015-0665-0730	Oil and gas player commissions produced water treatment plant DCN CWT00292	<a href="http://www.desalination.biz/news/news_story.asp?id=8025">http://www.desalination.biz/news/news_story.asp?id=8025</a>	Press Release, Public Announcement/Notice	Water, Desalination, and Reuse	05/12/2015	Water, Desalination, and Reuse. 2015. Oil and gas player commissions produced water treatment plant.	Centralized Waste Treaters	1	No	No	CWT00292
1.4	EPA-HQ-OW-2015-0665-1028	Game Changing Technology for Treating and Recycling Frac Water - DCN CWT00313	This paper addresses an advanced oxidation and precipitation water treatment process employed as an on-the-fly fluid pretreatment during hydraulic fracturing operations.	Report	Ely, John W.; Horn, Aaron; Cathey, Robbie;	10/30/2011	Ely, John W., et al. 2011. Game Changing Technology for Treating and Recycling Frac Water. Society of Petroleum Engineering. SP SPE-214545-PP	Centralized Waste Treaters	12	No	Yes	CWT00313
1.4	EPA-HQ-OW-2015-0665-0969	GPRI Reverse Osmosis Research - DCN CWT00314	A teleconference call with a researcher from Global Petroleum Research Institute discussing reverse osmosis as a wastewater treatment technology for shale gas operators.	Meeting or Teleconference Materials	Burnett, David	09/26/2011	Burnett, D. 2011. Telephone Communication with David Burnett, Global Petroleum Research Institute, and Sarah Hays, Eastern Research Group, Inc.	Centralized Waste Treaters	2	No	No	CWT00314

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.4	EPA-HQ-OW-2015-0665-1031	A Guide to Practical Management of Produced Water from Onshore Oil and Gas Operations in the United States (DE-PS26-04NT15460-02) DCN CWT00690	A report that focuses on technologies and practices used to manage UOG wastewater.	Report	ALL Consulting	10/01/2006	ALL Consulting, LLC. 2006. A Guide to Practical Management of Produced Water from Onshore Oil and Gas Operations in the United States	Centralized Waste Treaters	316	No	No	CWT00318
1.4	EPA-HQ-OW-2015-0665-1032	Minimum Effective Dose: A Study of Flowback and Produced Fluid Treatment for Use as Hydraulic Fracturing Fluid - DCN CWT00319	This paper was prepared for presentation at the American Association of Petroleum Geologists "Geosciences Technology Workshop" in San Antonio, TX,	Publication; Copyrighted Material	Horn, Aaron	03/18/2013	Horn, A; Patton, M; Hu, J. 2013. Minimum Effective Dose: A Study of Flowback and Produced Fluid Treatment for Use as Hydraulic Fracturing Fluid.	Centralized Waste Treaters	7	No	Yes	CWT00320
1.4	EPA-HQ-OW-2015-0665-1061	Development Document for Effluent Limitation Guidelines and Standards for the Centralized Waste Treatment Industry - Final (EPA 821-R-00-020) - DCN CWT00324	A development document for the CWT point source category including subcategories A (metal bearing wastewater), B (oily wastewater), C (organic waste), and D (combination of A, B, and C).	Publication; USEPA	U.S. EPA	08/01/2000	U.S. EPA. 2000. Development Document for Effluent Limitation Guidelines and Standards for the Centralized Waste Treatment Industry EPA 821-R-00-020.	Centralized Waste Treaters	1	No	No	CWT00324



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.4	EPA-HQ-OW-2015-0665-1116	An Integrated Water Treatment Technology Solution for Sustainable Water Resource Management in the Marcellus Shale - DCN CWT00325	A report investigating sustainable solutions for wastewater from the Marcellus Shale. A life cycle analysis is presented on the AltelaRain 4000 evaporation system.	Publication; Other Governmental	Bruff, Matthew	06/30/2011	Bruff, Matthew. 2011. An Integrated Water Treatment Technology Solution for Sustainable Water Resource Management in the Marcellus Shale.	Centralized Waste Treaters	295	No	No	CWT00325
1.4	EPA-HQ-OW-2015-0665-1064	The Economics of Water Management - DCN CWT00332	This presentation provides an overview of Pioneer Natural Resource's wastewater management in the Eagle Ford formation.	Meeting or Teleconference Materials	Dunkel, Michael	11/28/2012	Michael Dunkel. 2012. The Economics of Water Management. Pioneer Natural Resources.	Centralized Waste Treaters	15	No	No	CWT00332
1.4	EPA-HQ-OW-2015-0665-0975	Characterization of Marcellus Shale and Barnett Shale Flowback Waters and Technology Development for Water Reuse DCN CWT00339	A presentation on characterization of Marcellus and Barnett Shale flowback waters and technology development for water reuse.	Meeting or Teleconference Materials	Hayes, Tom	03/30/2011	Hayes, T. 2011. Characterization of Marcellus Shale and Barnett Shale Flowback Waters and Technology Development for Water Reuse	Centralized Waste Treaters	48	No	No	CWT00339

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.4	EPA-HQ-OW-2015-0665-0976	Recovering Valuable Byproducts from Oil and Gas Wastes DCN CWT00340	Paper on drilling fluid wastewater treatment and management.	Study	Huffmyer, Russell; Gehucheten, John	11/16/2013	Huffmyer, Russell and Gehucheten, John. 2013. Recovering Valuable Byproducts from Oil and Gas Wastes. HDR Engineering, Inc. IWC-13-37. (November 17).	Centralized Waste Treaters	13	No	No	CWT00340
1.4	EPA-HQ-OW-2015-0665-0984	Examining Water Production Volumes and Produced Water Quality in the Mississippi Lime to Develop Appropriate Management Strategies - DCN CWT00348	Examining Water Production Volumes and Produced Water Quality in the Mississippi Lime to Develop Appropriate Management Strategies presentation	Meeting or Teleconference Materials	Murray, Kyle E.	06/01/2013	Murray, K.E. 2013. Examining Water Production Volumes and Produced Water Quality in the Mississippi Lime to Develop Appropriate Management Strategies.	Centralized Waste Treaters	11	No	No	CWT00348
1.4	EPA-HQ-OW-2015-0665-0588	Optimizing Fracturing Fluids from Flowback Water DCN CWT00353	An article about the design and procedures of reusing flowback and produced water as hydraulic fracturing fluids.	Publication; Copyrighted Material	Rimassa, Shawn; Howard, Paul; Blow, Kriste	06/01/2009	Rimassa, Shawn; Howard, Paul; Blow, Kristel; Schlumberger. 2009. Optimizing Fracturing Fluids from Flowback Water. Society of Petroleum Engineers.	Centralized Waste Treaters	9	No	Yes	CWT00353

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1.4	EPA-HQ-OW-2015-0665-0589	Pretreatment Targets for Salt Recovery from Marcellus Shale Gas Produced Water DCN CWT00354	Paper on produced water treatment using chemical addition.	Study	Silva, James	11/16/2013	Silva, J; Gettings, R; Kostedt, W; Watkins, V. 2013. Pretreatment Targets for Salt Recovery from Marcellus Shale Gas Produced Water.	Centralized Waste Treaters	10	No	No	CWT00354
1.4	EPA-HQ-OW-2015-0665-0590	Key Shale Gas Water Management Strategies: An Economic Assessment Tool - DCN CWT00355	Paper analyzing the total life cycle water management costs per frac comparing options and costs of water supply and water transportation; cost and options for disposal, re-use, and recycling; and impact of water quality on frac chemical costs	Publication; Copyrighted Material	Slutz, James et al.	09/11/2013	Slutz, J; Anderson, J; Broderick, R; Horner, P. 2012. Key Shale Gas Water Management Strategies: An Economic Assessment Tool. (September 11).	Centralized Waste Treaters	15	No	Yes	CWT00355
1.4	EPA-HQ-OW-2015-0665-0655	Flowback Treatment and Reuse Strategies for Tight Oil Formations DCN CWT00364	This presentation examines treatment and reuse strategies for various tight oil formations.	Meeting or Teleconference Materials	Yoxtheimer, Dave	10/29/2012	Yoxtheimer, Dave. 2012. Flowback Treatment and Reuse Strategies for Tight Oil Formations. Penn State Marcellus Center for Outreach and Research.	Centralized Waste Treaters	20	No	No	CWT00364

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.5	EPA-HQ-OW-2015-0665-0608	Offsite Commercial Disposal of Oil and Gas Exploration and Production Waste: Availability, Options, and Costs - DCN CWT00084	This report describes the new 2005–2006 database and focuses on the availability of offsite commercial disposal companies, the prevailing disposal methods, and estimated disposal costs.	Publication; Other Governmental	Veil, J.A. and Puder, M.G.	08/01/2006	Veil, J.A. & Puder, M.G. 2006. Offsite Commercial Disposal of O&G E&P Waste: Availability, Options, and Costs. Argonne National Laboratory.	Centralized Waste Treaters	148	No	No	CWT00084
1.5	EPA-HQ-OW-2015-0665-0609	List of Centralized Waste Treatment Facilities for Promulgation - DCN CWT00086	This file contains non confidential information related to a list of CWTs.	Fact/Data Sheet	U.S. EPA	02/16/2000	U.S. EPA. 2000. List of Centralized Waste Treatment Facilities for Promulgation.	Centralized Waste Treaters	11	No	No	CWT00086
1.5	EPA-HQ-OW-2015-0665-0675	Analysis of Centralized Waste Treatment Facilities (CWTs) Accepting UOG Wastewater DCN CWT00087	Memorandum summarizing information available for UOG extraction wastewater management at CWT facilities	Memorandum	ERG	06/01/2016	ERG. 2016. Analysis of Centralized Waste Treatment Facilities (CWTs) Accepting UOG Extraction Wastewater.	Centralized Waste Treaters	14	No	No	CWT00087

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.5	EPA-HQ-OW-2015-0665-0675.1	Analysis of Centralized Waste Treatment Facilities (CWTs) Accepting UOG Wastewater Attachment 1: UOG CWT List and Analysis DCN CWT00087.A01	Tables and graphs which show the number of new wells drilled per year and the number of active CWTs in the Marcellus and Utica regions from 2004 through 2012	Data	ERG	06/01/2016	ERG. 2016. Analysis of Centralized Waste Treatment Facilities (CWTs) Accepting UOG Wastewater Attachment 1: UOG CWT List and Analysis	Centralized Waste Treaters	1	No	No	CWT00087.A1
1.5	EPA-HQ-OW-2015-0665-0610	Centralized Waste Treatment Facilities in New York - DCN CWT00088	A list of CWT Facilities in New York.	Fact/Data Sheet	New York DEC		New York DEC. Unknown. Centralized Waste Treatment Facilities in New York.	Centralized Waste Treaters	2	No	No	CWT00088
1.5	EPA-HQ-OW-2015-0665-0611	Facility Chief's Order Summaries from Ohio - DCN CWT00089	A table of chief order summaries from Ohio.	Data	Ohio DNR	03/06/2014	Ohio DNR. 2014. Facility Chief's Order Summaries from Ohio.	Centralized Waste Treaters	2	No	No	CWT00089

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.5	EPA-HQ-OW-2015-0665-0612	Ohio Department of Natural Resources Permitted Facilities - DCN CWT00090	A list of 23 ODNR permitted facilities.	Fact/Data Sheet	Ohio DNR		Ohio DNR. Unknown. Ohio Department of Natural Resources Permitted Facilities.	Centralized Waste Treaters	6	No	No	CWT00090
1.5	EPA-HQ-OW-2015-0665-0613	Oil and Gas Wastewater Facility List - DCN CWT00091	A listing of oil and gas wastewater facilities in Pennsylvania.	Fact/Data Sheet	Pennsylvania Department of Environmental P		PA DEP. Unknown. Oil and Gas Wastewater Facility List. <a href="https://www.paoilandgasreporting.state.pa.us/publicreports/Modules">https://www.paoilandgasreporting.state.pa.us/publicreports/Modules</a> .	Centralized Waste Treaters	3	No	No	CWT00091
1.5	EPA-HQ-OW-2015-0665-0614	Commercial Recycling & Surface Disposal Facilities - DCN CWT00092	A list of commercial recycling & surface disposal facilities in Texas.	Fact/Data Sheet	Railroad Commission of Texas	05/29/2014	Railroad Commission of Texas. 2014. Commercial Recycling & Surface Disposal Facilities.	Centralized Waste Treaters	24	No	No	CWT00092

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.5	EPA-HQ-OW-2015-0665-0615	Commercial E&P Waste Disposal Facilities in the United States - DCN CWT00093	A list of commercial exploration and production waste disposal facilities in the United States.	Data	Veil, J.A.	01/01/2014	Veil, J.A. 2014. Commercial E&P Waste Disposal Facilities in the United States.	Centralized Waste Treaters	1	No	No	CWT00093
1.5	EPA-HQ-OW-2015-0665-0616	Neptune Water Treatment Facility - DCN CWT00094	A factsheet presenting the development of the Neptune Water Treatment Facility in Wyoming.	Fact/Data Sheet	Encana		Encana. Unknown. Neptune Water Treatment Facility.	Centralized Waste Treaters	2	No	No	CWT00094
1.5	EPA-HQ-OW-2015-0665-0617	Permitted Commercial Oil Disposal Facilities - DCN CWT00095	A list of permitted commercial oil disposal facilities in Wyoming.	Data	Wyoming DEQ	03/19/2014	Wyoming DEQ. 2014. Permitted Commercial Oil Disposal Facilities. <a href="http://deq.state.wy.us/wqd/www/Docs/Active%20OWDF.pdf">http://deq.state.wy.us/wqd/www/Docs/Active%20OWDF.pdf</a> .	Centralized Waste Treaters	1	No	No	CWT00095

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1.5	EPA-HQ-OW-2015-0665-1029	Radium Content of Oil and Gas-Field Produced Waters in the Northern Appalachian Basin (USA): Summary and Discussion of Data DCN CWT00316	Radium activity data for produced water from oil and gas operations in PA and NY. When available, TDS, gross alpha, and gross beta particles data was included.	Report	Rowan, E.; Engle, C.; Kraemer	01/01/2011	Rowan, E.L., et al. 2011. Radium content of oil and gas field produced waters in the northern App Basin. USGS Scientific Investigations Report 2011-5135.	Centralized Waste Treaters	38	No	No	CWT00316
1.5	EPA-HQ-OW-2015-0665-1033	Development and Use of High-TDS Recycled Produced Water for Crosslinked-Gel-Based Hydraulic Fracturing - DCN CWT00321	This paper describes use of treated produced water as the base fluid for crosslinked-gel-based hydraulic fracturing.	Publication; Copyrighted Material	Lord, LeBas	02/04/2013	Lord, R. LeBas; Luna, D.; Shahan, T. 2013. Development and Use of High-TDS Recycled Produced Water for Crosslinked-Gel-Based Hydraulic Fracturing.	Centralized Waste Treaters	9	No	Yes	CWT00321
1.5	EPA-HQ-OW-2015-0665-1110	Geochemical and Strontium Isotope Characterization of Produced Waters from Marcellus Shale Natural Gas Extraction DCN CWT00326	Identify and quantify the interaction of Marcellus Formation produced waters with other Appalachian Basin waters in the event of an accidental release.	Publication; Copyrighted Material	Campbell, E., et al	01/01/2012	Campbell, E., et al. 2012. Geochemical and Strontium Isotope Characterization of Produced Waters from Marcellus Shale Natural Gas Extraction	Centralized Waste Treaters	9	No	Yes	CWT00326



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.5	EPA-HQ-OW-2015-0665-1114	What Chemicals Are Used DCN CWT00330	List of fracking chemicals	Publication; Copyrighted Material	FracFocus	01/01/2014	FracFocus. 2014. What Chemicals Are Used?	Centralized Waste Treaters	2	No	No	CWT00330
1.5	EPA-HQ-OW-2015-0665-1063	Advanced Well Stimulation Technologies in California: An Independent Review of Scientific and Technical Information DCN CWT00331	California council on Science and Technology's independent review of advanced well stimulation technologies in California. Report includes information on advanced well stimulation technologies, and historic and current applications.	Publication; Copyrighted Material	California Council on Science and Technolo	08/28/2014	CCST. 2014. Advanced Well Stimulation Technologies in California: An Independent Review of Scientific and Technical Information.	Centralized Waste Treaters	400	No	No	CWT00331
1.5	EPA-HQ-OW-2015-0665-0973	Northern Great Plains Water Consortium (NGPWC): Bakken Water Opportunities Assessment. North Dakota Petroleum Council Annual Meeting. (September) DCN CWT00337	Northern Great Plains Water Consortium Bakken water opportunities assessment presentation. Looked at potential to recycle frac flowback water in Bakken play. Includes discussion of Bakken water opportunities, project status, information on flowback.	Meeting or Teleconference Materials	Harju, John	01/01/2009	Harju, John. EERC (NGPWC) Bakken Water Opportunities Assessment North Dakota Petroleum Council Annual Meeting September 2009.	Centralized Waste Treaters	25	No	No	CWT00337

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
1.5	EPA-HQ-OW-2015-0665-0979	Draft: Supplemental Generic Environmental Impact Statement (SGEIS) on the Oil, Gas, and Solution Mining Regulatory Program DCN CWT00343	A preliminary draft report discussing an EIS on oil, gas, and solution mining. Focuses on "Well Permit Issuance for Horizontal Drilling And High-Volume Hydraulic Fracturing to Develop the Marcellus Shale and Other Low-Permeability Gas Reservoirs".	Publication; Other Governmental	New York State Department of Environmental	09/01/2009	NYSDEC. 2009. Supplemental Generic Environmental Impact Statement (SGEIS) on the Oil, Gas, and Solution Mining Regulatory Program.	Centralized Waste Treaters	804	No	No	CWT00343
1.5	EPA-HQ-OW-2015-0665-0980	Organic compounds in produced waters from shale gas wells DCN CWT00344	A detailed analysis is reported of the organic composition of produced water samples from typical shale gas wells in the Marcellus (PA), Eagle Ford (TX), and Barnett (NM) formations.	Publication; Other Governmental	Maguire-Boyle, S.J. and Barron, A.R.	08/13/2014	Maguire-Boyle, S.J. and Barron, A.R. 2014. Organic compounds in produced waters from shale gas wells. Royal Society of Chemistry.	Centralized Waste Treaters	12	No	No	CWT00344
1.5	EPA-HQ-OW-2015-0665-0987	Baseline Groundwater Quality Testing Needs in the Eagle Ford Shale Region April 2012 DCN CWT00352	Masters project discussing whether existing baseline groundwater quality data in the Eagle Ford shale region of southern Texas is adequate to provide a comparison to potential future contamination from oil and gas development.	Report	Palacios, Virginia	04/01/2012	Palacios, Virginia. 2012. Baseline Groundwater Quality Testing Needs in the Eagle Ford Shale Region April 2012	Centralized Waste Treaters	88	No	No	CWT00352

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.0	EPA-HQ-OW-2015-0665-0673	OCD Permitting: Well Search - DCN CWT00230	Searchable online production database.	Publication; Other Governmental	New Mexico Energy, Minerals and Natural Re	01/01/2014	New Mexico Energy, Minerals and Natural Resources Department (NMEMND). 2014. OCD Permitting: Well Search.	Centralized Waste Treaters	3	No	No	CWT00230
2.0	EPA-HQ-OW-2015-0665-0673.1	Copyright data clarification for US EPA (NM EMNRD) DCN CWT00230.A01	Permission from New Mexico Energy, Minerals and Natural Resources Department for EPA to publish their data.	E-mail	Wade, Gabriel	02/19/2015	Wade, Gabriel. 2015. Copyright data clarification for US EPA (NM EMNRD).	Centralized Waste Treaters	4	No	No	CWT00230.A1
2.0	EPA-HQ-OW-2015-0665-0710	Question on Southwestern NPDES Facilities DCN CWT00272	An email exchange between EPA and Southwestern Energy regarding their CWT Facilities.	E-mail	Fyfe, Peter	07/25/2016	Fyfe, Peter. 2016. Question on Southwestern NPDES Facilities. Southwestern Energy. (July 25).	Centralized Waste Treaters	2	No	No	CWT00272

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.0	EPA-HQ-OW-2015-0665-0711	General Permit WMGR123 Processing and Beneficial Use Of Oil and Gas Liquid Waste DCN CWT00273	Permit information including definitions, requirements, and contact information.	Permit, Registration	Pennsylvania Department of Environmental P	03/14/2012	PA DEP. 2012. General Permit WMGR123 Processing and Beneficial Use Of Oil and Gas Liquid Waste. Rev. 3/2012.	Centralized Waste Treaters	13	No	No	CWT00273
2.1	EPA-HQ-OW-2015-0665-0634	Waste Management Paper #2-24 - DCN CWT00130	Working paper of the NPC North American Resource Development Study. Report on waste management in oil and gas exploration and production. Includes background on drilling wastes and a description of waste management techniques.	Report	National Petroleum Council (NPC)	09/15/2011	National Petroleum Council (NPC). 2011. Waste Management Paper #2-24. Technology Subgroup of the Operations & Environment Task Group. (September 15).	Centralized Waste Treaters	33	No	No	CWT00130
2.1	EPA-HQ-OW-2015-0665-0568	Discharge Monitoring Report Pollutant Loading Tool - DCN CWT00135	Screen shot of the EPA's Discharge Monitoring Report Pollutant Tool Facility Search page.	Publication; USEPA	U.S. EPA	06/17/2016	U.S. EPA. 2016. Discharge Monitoring Report (DMR) Pollutant Loading Tool. Accessed on 6/17/2016. Available online at: <a href="http://cfpub.epa.gov/dmr/">http://cfpub.epa.gov/dmr/</a>	Centralized Waste Treaters	1	No	No	CWT00135

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.1	EPA-HQ-OW-2015-0665-0570	CBI_DI Desktop@ March 2015 Download - DCN CWT00145	CBI_Nationwide database of oil and gas wells. This is proprietary data and is being treated as CBI.	Publication; Copyrighted Material	DrillingInfo, Inc.	03/30/2015	DrillingInfo, Inc. 2015. DI Desktop@ March 2015 Download_CBI.	Centralized Waste Treaters	1	Yes	Yes	CWT00145
2.1	EPA-HQ-OW-2015-0665-0727	Facility Call: Hibbard Tank Pad DCN CWT00288	A summary of a call with a CWT facility.	Meeting or Teleconference Materials	ERG	08/03/2016	ERG. 2016. Facility Call: Hibbard Tank Pad.	Centralized Waste Treaters	1	No	No	CWT00288
2.1	EPA-HQ-OW-2015-0665-0728	Facility Call: R360 Environmental Solutions DCN CWT00289	A summary of a call with a CWT facility.	Meeting or Teleconference Materials	ERG	08/03/2016	ERG. 2016. Facility Call: R360 Environmental Solutions.	Centralized Waste Treaters	1	No	No	CWT00289

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.1	EPA-HQ-OW-2015-0665-0729	Facility Call: Waste Control Specialists, LLC DCN CWT00291	A summary of a call with a CWT facility.	Meeting or Teleconference Materials	ERG	08/03/2016	ERG. 2016. Facility Call: Waste Control Specialists, LLC.	Centralized Waste Treaters	1	No	No	CWT00291
2.1	EPA-HQ-OW-2015-0665-0731	Waste Treatment Corporation DCN CWT00293	Information about the facility provided by the point of contact.	Fact/Data Sheet	Kelly Roddy	06/03/2016	Kelly Roddy. 2016. Waste Treatment Corporation.	Centralized Waste Treaters	8	No	No	CWT00293
2.10	EPA-HQ-OW-2015-0665-0733	Environmental Engineering Support for Clean Water Regulations Programmatic Quality Assurance Project Plan (PQAPP) DCN CWT00295	ERG's Environmental Engineering Support for Clean Water Regulation Programmatic Quality Assurance Project Plan. Outlines quality assurance/quality control procedures followed under the contract.	Report	ERG	10/01/2013	ERG. 2013. Environmental Engineering Support for Clean Water Regulations Programmatic Quality Assurance Project Plan (PQAPP).	Centralized Waste Treaters	127	No	No	CWT00295

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.3	EPA-HQ-OW-2015-0665-0603	Site Visit Report for Nuverra Appalachian Water Services, Masontown, PA, Centralized Waste Treatment - DCN CWT00062	A site visit report that summarizes Nuverra Appalachian Water Services' operations in Masontown, PA.	Publication; USEPA	U.S. EPA	01/25/2014	U.S. EPA. 2014. Site Visit Report for Nuverra Appalachian Water Services, Masontown, PA, Centralized Waste Treatment. (January 25).	Centralized Waste Treaters	18	No	No	CWT00062
2.3	EPA-HQ-OW-2015-0665-0604	Site Visit Report for Reserved Environmental Services, LLC, Mt. Pleasant, PA, Centralized Waste Treatment - DCN CWT00063	A site visit report that summarizes Reserved Environmental Services, LLC's operations in Mt. Pleasant, PA.	Publication; USEPA	U.S. EPA	02/10/2015	U.S. EPA. 2015. Site Visit Report for Reserved Environmental Services, LLC, Mt. Pleasant, PA, Centralized Waste Treatment. (February 10).	Centralized Waste Treaters	29	No	No	CWT00063
2.3	EPA-HQ-OW-2015-0665-0605	Site Visit Report for Patriot Water Treatment LLC, Warren, OH, Centralized Waste Treatment Facility - DCN CWT00064	A site visit report that summarizes Patriot Water Treatment LLC operations in Warren, OH.	Publication; USEPA	U.S. EPA	03/03/2015	U.S. EPA. 2015. Site Visit Report for Patriot Water Treatment LLC, Warren, OH, Centralized Waste Treatment Facility. (March 3).	Centralized Waste Treaters	51	No	No	CWT00064

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.3	EPA-HQ-OW-2015-0665-0627	Sanitized Site Visit Report Chesapeake Energy Corporation Marcellus Shale Gas Operations - DCN CWT00111	The Chesapeake Marcellus Shale site was visited by EPA during the UOG rulemaking. The site visit was the first in a series of site visits that the EPA plans for this industry. During the site visits, EPA viewed a range of shale gas operations.	Publication; USEPA	U.S. EPA	02/06/2015	U.S. EPA. 2015. Sanitized Site Visit Report Chesapeake Energy Corporation Marcellus Shale Gas Operations (Sanitized).	Centralized Waste Treaters	42	No	No	CWT00111
2.3	EPA-HQ-OW-2015-0665-0631	CBI_Fairmont Brine Site Visit Report - DCN CWT00116	CBI_Fairmont Brine Site Visit Report	Report	ERG	05/26/2016	ERG. 2016. Fairmont Brine Site Visit Report.	Centralized Waste Treaters	1	Yes	No	CWT00116
2.3	EPA-HQ-OW-2015-0665-0742	CBI_Enclosure 7_NGL Anticline_Site Visit Report - DCN CWT00152.pdf	CBI_Enclosure 7_NGL Anticline_Site Visit Report	Report	ERG	07/11/2016	ERG. 2016. CBI_Enclosure 7_NGL Anticline_Site Visit Report.	Centralized Waste Treaters	1	Yes	No	CWT00152



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.3	EPA-HQ-OW-2015-0665-0687	Notes on Meeting with Hydrozonix, LLC on 7 February 2014 - DCN CWT00241	A summary of a telephone conference between ERG and Hydrozonix about their advanced oxidation treatment technology.	Meeting Materials	ERG	03/07/2014	ERG. 2014. Ruminski, Brent. Notes on Call with Hydrozonix, LLC on 7 February 2014. (March 7.)	Centralized Waste Treaters	9	No	No	CWT00241
2.3	EPA-HQ-OW-2015-0665-0967	Sanitized Site Visit Report Southwestern Energy Fayetteville Shale Operations DCN CWT00266	Site Visit Report generated during the UOG rulemaking	Publication; USEPA	U.S. EPA	02/11/2015	U.S. EPA. 2015. Sanitized Site Visit Report Southwestern Energy Fayetteville Shale Operations.	Centralized Waste Treaters	35	No	No	CWT00266
2.3	EPA-HQ-OW-2015-0665-0735	Sanitized Site Visit Report for McCutcheon Enterprises Inc. Apollo, PA - Centralized Waste Treatment - DCN CWT00307	EPA is studying management of wastewaters from oil and gas extraction activities by CWT facilities. The recent increase in shale oil and shale gas extraction activities through practices such as hydraulic fracturing has increased needs.	Report	U.S. EPA	05/27/2015	U.S. EPA. 2015. Sanitized Site Visit Report for McCutcheon Enterprises Inc. Apollo, PA - Centralized Waste Treatment.	Centralized Waste Treaters	16	No	No	CWT00307

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.3	EPA-HQ-OW-2015-0665-0965	Sanitized Eureka Site Visit Report DCN CWT00308	This site visit report summarizes information collected during EPA's site visit to Eureka Resources in Williamsport, PA. Eureka operates a CWT that utilizes evaporation/condensation to treat Marcellus wastewater and discharges to a local POTW.	Report	ERG	03/10/2017	ERG. 2017. Sanitized Eureka Site Visit Report.	Centralized Waste Treaters	28	No	No	CWT00308
2.3	EPA-HQ-OW-2015-0665-0736	Sanitized Meeting Report Altela, Inc. and Clarion Altela Environmental Services (CAES) Clarion, PA - DCN CWT00310	This report summarizes information collected during EPA's meeting with Altela, Inc.	Publication; USEPA	U.S. EPA	05/17/2017	U.S. EPA. 2017. Sanitized Meeting Report Altela, Inc. and Clarion Altela Environmental Services (CAES) Clarion, PA.	Centralized Waste Treaters	9	No	No	CWT00310
2.4	EPA-HQ-OW-2015-0665-0745	CBI_Anticline Sampling Episode Report - DCN CWT00161	CBI_Anticline Sampling Episode Report	Report	ERG	11/15/2016	ERG. 2016. Anticline Sampling Episode Report.	Centralized Waste Treaters	1	Yes	No	CWT00161

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.4	EPA-HQ-OW-2015-0665-0746	CBI_Eureka Sampling Episode Report - DCN CWT00162	CBI_Eureka Sampling Episode Report	Report	ERG	11/15/2016	ERG. 2016. Eureka Sampling Episode Report.	Centralized Waste Treaters	1	Yes	No	CWT00162
2.6	EPA-HQ-OW-2015-0665-0696	COGIS - Production Database DCN CWT00255	Searchable online production database.	Data	Colorado Oil and Gas Conservation Commissi	02/25/2015	Colorado Oil and Gas Conservation Commission (COGCC). 2015. COGIS - Production Database.	Centralized Waste Treaters	1	No	No	CWT00255
2.6	EPA-HQ-OW-2015-0665-0697	Pennsylvania Department of Environmental Protection's Statewide Oil and Gas Waste Reports DCN CWT00257	ERG memorandum listing the oil and gas waste reports downloaded from the PA DEP on 12/22/2014, 11/12/2015, and 8/2/2016.	Memorandum	Eastern Research Group	08/02/2016	ERG. 2016. Pennsylvania Department of Environmental Protection's (PA DEP) Statewide Oil and Gas Waste Reports. (August)	Centralized Waste Treaters	6	No	No	CWT00257

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.6	EPA-HQ-OW-2015-0665-0697.01	Statewide Data Downloads by Reporting Period - Attachment 1: Jan-Dec 2015 Waste (Conventional wells) DCN CWT00257.A01	PA DEP Jan - Dec 2015 oil and gas waste report for conventional wells.	Data	Pennsylvania Department of Environmental P	08/02/2016	PA DEP. 2016. Statewide Data Downloads by Reporting Period - Attachment 1: Jan-Dec 2015 Waste (Conventional wells). (Aug 2)	Centralized Waste Treaters	1	No	No	CWT00257.A01
2.6	EPA-HQ-OW-2015-0665-0697.02	Statewide Data Downloads by Reporting Period - Attachment 2: Jan-Jun 2015 Waste (Unconventional wells) DCN CWT00257.A02	PA DEP Jan - Jun 2015 oil and gas waste report for unconventional wells.	Data	Pennsylvania Department of Environmental P	08/02/2016	PA DEP. 2016. Statewide Data Downloads by Reporting Period - Attach. 2: Jan-Jun 2015 Waste (Unconventional wells). (Aug 2).	Centralized Waste Treaters	1	No	No	CWT00257.A02
2.6	EPA-HQ-OW-2015-0665-0697.03	Statewide Data Downloads by Reporting Period - Attachment 3: Jul-Dec 2015 Waste (Unconventional wells) DCN CWT00257.A03	PA DEP Jul - Dec 2015 oil and gas waste report for unconventional wells.	Data	Pennsylvania Department of Environmental P	08/02/2016	PA DEP. 2016. Statewide Data Downloads by Reporting Period - Attach. 3: Jul-Dec 2015 Waste (Unconventional wells). (Aug 2).	Centralized Waste Treaters	1	No	No	CWT00257.A03

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.6	EPA-HQ-OW-2015-0665-0697.04	Statewide Data Downloads by Reporting Period - Attachment 4: Jan-Dec 2014 Waste (Conventional wells) DCN CWT00257.A04	PA DEP Jan - Dec 2014 oil and gas waste report for conventional wells.	Data	Pennsylvania Department of Environmental P	11/12/2015	PA DEP. 2015. Statewide Data Downloads by Reporting Period - Attachment 4: Jan-Dec 2014 Waste (Conventional wells). (Nov 12)	Centralized Waste Treaters	1	No	No	CWT00257.A04
2.6	EPA-HQ-OW-2015-0665-0697.05	Statewide Data Downloads by Reporting Period - Attachment 5: Jan-Jun 2014 Waste (Unconventional wells) DCN CWT00257.A0	PA DEP Jan - Jun 2014 oil and gas waste report for unconventional wells.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period - Attach. 5: Jan-Jun 2014 Waste (Unconventional wells). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A05
2.6	EPA-HQ-OW-2015-0665-0697.06	Statewide Data Downloads by Reporting Period - Attachment 6: Jul-Dec 2014 Waste (Unconventional wells) DCN CWT00257.A0	PA DEP Jul - Dec 2014 oil and gas waste report for unconventional wells.	Data	Pennsylvania Department of Environmental P	11/12/2015	PA DEP. 2015. Statewide Data Downloads by Reporting Period - Attach. 6: Jul-Dec 2014 Waste (Unconventional wells). (Nov 12).	Centralized Waste Treaters	1	No	No	CWT00257.A06

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.6	EPA-HQ-OW-2015-0665-0697.07	Statewide Data Downloads by Reporting Period - Attachment 7: Jan-Dec 2013 Waste (Conventional wells) DCN CWT00257.A07	PA DEP Jan - Dec 2013 oil and gas waste report for conventional wells.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period - Attachment 7: Jan-Dec 2013 Waste (Conventional wells). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A07
2.6	EPA-HQ-OW-2015-0665-0697.08	Statewide Data Downloads by Reporting Period - Attachment 8: Jan-Jun 2013 Waste (Unconventional wells) DCN CWT00257.A08	PA DEP Jan - Jun 2013 oil and gas waste report for unconventional wells.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period - Attachment 8: Jan-Jun 2013 Waste (Unconventional wells). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A08
2.6	EPA-HQ-OW-2015-0665-0697.09	Statewide Data Downloads by Reporting Period - Attachment 9: Jul-Dec 2013 Waste (Unconventional wells) DCN CWT00257.A09	PA DEP Jul - Dec 2013 oil and gas waste report for unconventional wells.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period - Attachment 9: Jul-Dec 2013 Waste (Unconventional wells). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A09

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.6	EPA-HQ-OW-2015-0665-0697.10	Statewide Data Downloads by Reporting Period - Attachment 10: Jan-Dec 2012 Waste (Conventional wells) DCN CWT00257.A10	PA DEP Jan - Dec 2012 oil and gas waste report for conventional wells.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period - Attachment 10: Jan-Dec 2012 Waste (Conventional wells). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A10
2.6	EPA-HQ-OW-2015-0665-0697.11	Statewide Data Downloads by Reporting Period - Attachment 11: Jan-Jun 2012 Waste (Unconventional wells) DCN CWT00257.A11	PA DEP Jan - Jun 2012 oil and gas waste report for unconventional wells.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period - Attachment 11: Jan-Jun 2012 Waste (Unconventional wells). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A11
2.6	EPA-HQ-OW-2015-0665-0697.12	Statewide Data Downloads by Reporting Period - Attachment 12: Jul-Dec 2012 Waste (Unconventional wells) DCN CWT00257.A12	PA DEP July - Dec 2012 oil and gas waste report for unconventional wells.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period - Attachment 12: Jul-Dec 2012 Waste (Unconventional wells). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A12

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.6	EPA-HQ-OW-2015-0665-0697.13	Statewide Data Downloads by Reporting Period - Attachment 13: Jan-Dec 2011 Waste (Annual O&G, without Marcellus) DCN CWT00257.A13	PA DEP Jan - Dec 2011 oil and gas waste report for Annual O&G without Marcellus.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period- Att. 13: Jan-Dec 2011 Waste (Annual O&G, without Marcellus). (Dec 22).	Centralized Waste Treaters	1	No	No	CWT00257.A13
2.6	EPA-HQ-OW-2015-0665-0697.14	Statewide Data Downloads by Reporting Period - Attachment 14: Jan-Jun 2011 Waste (Marcellus Only, 6 months) DCN CWT00257.A14	PA DEP Jan - Jun 2011 oil and gas waste report for Marcellus only.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period - Att. 14: Jan-Jun 2011 Waste (Marcellus Only, 6 months). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A14
2.6	EPA-HQ-OW-2015-0665-0697.15	Statewide Data Downloads by Reporting Period - Attachment 15: Jul-Dec 2011 Waste (Marcellus Only, 6 months) DCN CWT00257.A15	PA DEP July - Dec 2011 oil and gas waste report for Marcellus only.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period - Att. 15: Jul-Dec 2011 Waste (Marcellus Only, 6 months). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A15



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.6	EPA-HQ-OW-2015-0665-0697.16	Statewide Data Downloads by Reporting Period - Attachment 16: Jan-Dec 2010 Waste (Annual O&G, without Marcellus) DCN CWT00257.A16	PA DEP Jan - Dec 2010 oil and gas waste report for Annual O&G without Marcellus.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period- Att. 16: Jan-Dec 2010 Waste (Annual O&G, w/o Marcellus). (Dec 22).	Centralized Waste Treaters	1	No	No	CWT00257.A16
2.6	EPA-HQ-OW-2015-0665-0697.17	Statewide Data Downloads by Reporting Period - Attachment 17: Jul-Dec 2010 Waste (Marcellus Only, 6 months) DCN CWT00257.A17	PA DEP July - Dec 2010 oil and gas waste report for Marcellus only.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period - Att. 17: Jul-Dec 2010 Waste (Marcellus Only, 6 months). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A17
2.6	EPA-HQ-OW-2015-0665-0697.18	Statewide Data Downloads by Reporting Period - Attachment 18: Jul 2009-Jun 2010 Waste (Marcellus Only, 12 months) DCN CWT00257.A18	PA DEP Jul 2009 - Jun 2010 oil and gas waste report for Marcellus only.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period- Att. 18: Jul 2009-Jun 2010 Waste (Marcellus Only, 12 mos.). (Dec 22).	Centralized Waste Treaters	1	No	No	CWT00257.A18

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.6	EPA-HQ-OW-2015-0665-0697.19	Statewide Data Downloads by Reporting Period - Attachment 19: Jan-Dec 2009 Waste (Annual O&G, with Marcellus) DCN CWT00257.A19	PA DEP Jan - Dec 2009 oil and gas waste report for Annual O&G with Marcellus.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period- Att. 19: Jan-Dec 2009 Waste (Annual O&G, with Marcellus). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A19
2.6	EPA-HQ-OW-2015-0665-0697.20	Statewide Data Downloads by Reporting Period - Attachment 20: Jan-Dec 2008 Waste (Annual O&G, with Marcellus) DCN CWT00257.A20	PA DEP Jan - Dec 2008 oil and gas waste report for Annual O&G with Marcellus.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period- Att. 20: Jan-Dec 2008 Waste (Annual O&G, with Marcellus). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A20
2.6	EPA-HQ-OW-2015-0665-0697.21	Statewide Data Downloads by Reporting Period - Attachment 21: Jan-Dec 2007 Waste (Annual O&G, with Marcellus) DCN CWT00257.A21	PA DEP Jan - Dec 2007 oil and gas waste report for Annual O&G with Marcellus.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period- Att. 21: Jan-Dec 2007 Waste (Annual O&G, with Marcellus). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A21

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.6	EPA-HQ-OW-2015-0665-0697.22	Statewide Data Downloads by Reporting Period - Attachment 22: Jan-Dec 2006 Waste (Annual O&G, with Marcellus) DCN CWT00257.A22	PA DEP Jan - Dec 2006 oil and gas waste report for Annual O&G with Marcellus.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period- Att. 22: Jan-Dec 2006 Waste (Annual O&G, with Marcellus). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A22
2.6	EPA-HQ-OW-2015-0665-0697.23	Statewide Data Downloads by Reporting Period - Attachment 23: Jan-Dec 2005 Waste (Annual O&G, with Marcellus) DCN CWT00257.A23	PA DEP Jan - Dec 2005 oil and gas waste report for Annual O&G with Marcellus.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period- Att. 23: Jan-Dec 2005 Waste (Annual O&G, with Marcellus). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A23
2.6	EPA-HQ-OW-2015-0665-0697.24	Statewide Data Downloads by Reporting Period - Attachment 24: Jan-Dec 2004 Waste (Annual O&G, with Marcellus) DCN CWT00257.A24	PA DEP Jan - Dec 2004 oil and gas waste report for Annual O&G with Marcellus.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period- Att. 24: Jan-Dec 2004 Waste (Annual O&G, with Marcellus). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A24

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.6	EPA-HQ-OW-2015-0665-0697.25	Statewide Data Downloads by Reporting Period - Attachment 25: Jan-Dec 2003 Waste (Annual O&G, with Marcellus) DCN CWT00257.A25	PA DEP Jan - Dec 2003 oil and gas waste report for Annual O&G with Marcellus.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period- Att. 25: Jan-Dec 2003 Waste (Annual O&G, with Marcellus). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A25
2.6	EPA-HQ-OW-2015-0665-0697.26	Statewide Data Downloads by Reporting Period - Attachment 26: Jan-Dec 2002 Waste (Annual O&G, with Marcellus) DCN CWT00257.A26	PA DEP Jan - Dec 2002 oil and gas waste report for Annual O&G with Marcellus.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period- Att. 26: Jan-Dec 2002 Waste (Annual O&G, with Marcellus). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A26
2.6	EPA-HQ-OW-2015-0665-0697.27	Statewide Data Downloads by Reporting Period - Attachment 27: Jan-Dec 2001 Waste (Annual O&G, with Marcellus) DCN CWT00257.A27	PA DEP Jan - Dec 2001 oil and gas waste report for Annual O&G with Marcellus.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period- Att. 27: Jan-Dec 2001 Waste (Annual O&G, with Marcellus). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A27

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
2.6	EPA-HQ-OW-2015-0665-0697.28	Statewide Data Downloads by Reporting Period - Attachment 28: Jan-Dec 2000 Waste (Annual O&G, with Marcellus) DCN CWT00257.A28	PA DEP Jan - Dec 2000 oil and gas waste report for Annual O&G with Marcellus.	Data	Pennsylvania Department of Environmental P	12/22/2014	PA DEP. 2014. Statewide Data Downloads by Reporting Period- Att. 28: Jan-Dec 2000 Waste (Annual O&G, with Marcellus). (Dec. 22).	Centralized Waste Treaters	1	No	No	CWT00257.A28
2.9	EPA-HQ-OW-2015-0665-0540	Produced Water Volumes and Management Practices in the United States - DCN CWT00014	Current estimate for the volume of produced water generated from oil and gas production in the United States. The volume estimate represents a compilation of data obtained from numerous state oil and gas agencies and several federal sources.	Publication; Other Governmental	Clark, C.E.; Veil, J.A.	09/01/2009	Clark, C.E.; Veil, J.A. 2009. Produced Water Volumes and Management Practices in the United States. Argonne National Laboratory. ANL/EVS/R-09/1.	Centralized Waste Treaters	65	No	No	CWT00014
2.9	EPA-HQ-OW-2015-0665-1060	Sanitized Eureka Standing Stone Sampling and Analysis Plan DCN CWT00309	This sampling plan summarizes EPA's approach to collecting and analyzing samples of treated wastewater from Eureka.	Report	ERG	03/10/2017	ERG. 2017. Sanitized Eureka Standing Stone Sampling and Analysis Plan.	Centralized Waste Treaters		No	No	CWT00309

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
3.0	EPA-HQ-OW-2015-0665-0674	Conventional Oil and Gas (COG) Memorandum for the Record DCN CWT00128	This memorandum discusses conventional oil and gas (COG) extraction wastewater characteristics, as well as management and disposal practices used for COG extraction wastewater	Memorandum	ERG	06/01/2016	ERG. 2016. Conventional Oil and Gas Memorandum for the Record.	Centralized Waste Treaters	25	No	No	CWT00128
3.0	EPA-HQ-OW-2015-0665-0674.1	Conventional Oil and Gas (COG) Memorandum for the Record - Attachment 1: COG Drilling Wastewater Volume and Characterization Data - DCN CWT00128.A1	This file shows analysis on conventional oil and gas (COG) drilling wastewater characteristics.	Data	ERG	06/01/2016	ERG. 2016. Conventional Oil and Gas Memo for the Record - A01: COG Drilling Wastewater Volume and Characterization Data.	Centralized Waste Treaters	1	No	No	CWT00128.A1
3.0	EPA-HQ-OW-2015-0665-0674.2	Conventional Oil and Gas (COG) Memorandum for the Record - Attachment 2: COG Wastewater Characterization Analysis - DCN CWT00128.A2	This file shows analysis on conventional oil and gas (COG) produced water characteristics	Data	ERG	06/01/2016	ERG. 2016. Conventional Oil and Gas Memo for the Record - A02: COG Wastewater Characterization Analysis.	Centralized Waste Treaters	1	No	No	CWT00128.A2

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
3.0	EPA-HQ-OW-2015-0665-0674.3	Conventional Oil and Gas (COG) Memorandum for the Record - Attachment 3: COG Wastewater Characterization Database - DCN CWT00128.A3	This file is the conventional oil and gas (COG) extraction wastewater database	Data	ERG	06/01/2016	ERG. 2016. Conventional Oil and Gas Memorandum for the Record - Attachment 3: COG Wastewater Characterization Database.	Centralized Waste Treaters	1	No	No	CWT00128.A3
3.0	EPA-HQ-OW-2015-0665-0674.4	Conventional Oil and Gas (COG) Memorandum for the Record - Attachment 4: USGS Produced Water Database - COG Data - DCN CWT00128.A4	This file is the conventional oil and gas (COG) produced water database from USGS	Data	ERG	06/01/2016	ERG. 2016. Conventional Oil and Gas Memorandum for the Record - Attachment 4: USGS Produced Waster Database - COG Data.	Centralized Waste Treaters	1	No	No	CWT00128.A4
3.0	EPA-HQ-OW-2015-0665-0572	Unconventional Oil and Gas Drilling Wastewater Memorandum - DCN CWT00148	Memorandum summarizing information available for UOG drilling wastewater volumes, characteristics, and management	Memorandum	ERG	06/01/2016	ERG. 2016. Unconventional Oil and Gas (UOG) Drilling Wastewater Memorandum.	Centralized Waste Treaters	20	No	No	CWT00148

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
3.0	EPA-HQ-OW-2015-0665-0572.1	Unconventional Oil and Gas Drilling Wastewater Memorandum Attachment 1: UOG Drilling Wastewater Volume and Characterization Data Excel File - DCN CWT00148.A01	Analysis of information available for drilling wastewater volumes, characteristics, and management	Data	ERG	06/01/2016	ERG. 2016. Oil and Gas Drilling Wastewater Memorandum Attachment 1: UOG Drilling Wastewater Volume and Characterization Data Excel File.	Centralized Waste Treaters	1	No	No	CWT00148.A1
3.0	EPA-HQ-OW-2015-0665-0638	Decentralized Systems Technology Fact Sheet: Aerobic Treatment. - DCN CWT00200	Fact sheet for basic functionality and enhanced applicability for aerobic biological treatment.	Publication; USEPA	U.S. EPA	01/01/2000	U.S. EPA. 2000b. Decentralized Systems Technology Fact Sheet: Aerobic Treatment. Washington, D.C. (September).	Centralized Waste Treaters	8	No	No	CWT00200
3.0	EPA-HQ-OW-2015-0665-0645	Centralized Waste Treatment Facility List Approach Memo - DCN CWT00215	This memo outlines the steps taken by the EPA in creating a list of U.S. CWT facilities	Data	ERG	09/19/2015	ERG. 2015. Centralized Waste Treatment Facility List Approach Memo. (September 19).	Centralized Waste Treaters	34	No	No	CWT00215



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
3.0	EPA-HQ-OW-2015-0665-0647	Economic Analysis of Effluent Limitations Guidelines and Standards for the Centralized Waste Treatment Industry DCN CWT00220	This report estimates the economic and financial effects and the benefits of compliance with the proposed effluent limitations guidelines and standards for the Centralized Waste Treatment (CWT) industry.	Analysis	U.S. EPA	01/01/2006	U.S. EPA. 2006. Economic Analysis of Effluent Limitations Guidelines and Standards for the Centralized Waste Treatment Industry.	Centralized Waste Treaters	238	No	No	CWT00220
3.0	EPA-HQ-OW-2015-0665-0667	Treatment Technologies Relevant to the Unconventional Oil and Gas Industry DCN CWT00227	On 08 November 2013, the U.S. Environmental Protection Agency (EPA), along with EPA's contractor, Eastern Research Group, Inc (ERG), held a meeting with Purestream Technology (Purestream) 1 to discuss treatment technologies relevant to the unconventional	Meeting or Teleconference Materials	ERG	11/08/2013	U.S. Environmental Protection Agency (U.S. EPA). 2013d. Treatment Technologies Relevant to the Unconventional Oil and Gas Industry.	Centralized Waste Treaters	11	No	No	CWT00227
3.0	EPA-HQ-OW-2015-0665-0690	CoilChem, LLC Treatment Technology Memorandum - DCN CWT00246	Memorandum to the Record Discussing Treatment Technology from CoilChem, LLC.	Memorandum	ERG	01/06/2016	ERG. 2016. CoilChem, LLC Treatment Technology Memorandum.	Centralized Waste Treaters	2	No	No	CWT00246

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3.0	EPA-HQ-OW-2015-0665-0968	Conventional Oil and Gas Data Gathering and Data Gaps Memorandum DCN CWT00274	The primary objectives of this memorandum are to identify Centralized Waste Treatment (CWT) facilities and Publicly Owned Treatment Works (POTWs) that have accepted or are still accepting conventional oil and gas (COG) extraction wastewater.	Memorandum	ERG	03/01/2017	ERG. 2017. Conventional Oil and Gas Data Gathering and Data Gaps Memorandum.	Centralized Waste Treaters	21	No	No	CWT00274
3.0	EPA-HQ-OW-2015-0665-0968.1	Conventional Oil and Gas Data Gathering and Data Gaps Memorandum - Attachment 1: Facility List and Analysis DCN CWT00274.A01	Lists of Centralized Waste Treatment (CWT) facilities and Publicly Owned Treatment Works (POTWs) that have accepted or are still accepting conventional oil and gas (COG) extraction wastewater.	Data	ERG	03/01/2017	ERG. 2017. Conventional Oil and Gas Data Gathering and Data Gaps Memorandum - Attachment 1: Facility List and Analysis.	Centralized Waste Treaters	0	No	No	CWT00274.A1
3.0	EPA-HQ-OW-2015-0665-0968.2	Conventional Oil and Gas Data Gathering and Data Gaps Memorandum - Attachment 2: PA DEP Waste Reports Analysis Database DCN CWT00274.A02	An analysis of PA DEP Waste Report data to identify Centralized Waste Treatment (CWT) facilities and Publicly Owned Treatment Works (POTWs) that have accepted or are still accepting conventional oil and gas (COG) extraction wastewater.	Data	ERG	03/01/2017	ERG. 2017. Conventional Oil and Gas Data Gathering and Data Gaps Memorandum - Attachment 2: PA DEP Waste Reports Analysis Database.	Centralized Waste Treaters	0	No	No	CWT00274.A2

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3.0	EPA-HQ-OW-2015-0665-0964	Centralized Waste Treatment Facilities Identified by the 304(m) 2014 Annual Review DCN CWT00275	A summary memo of facilities identified during the 2015 Annual Review process	Memorandum	ERG	05/11/2017	ERG. 2017. Centralized Waste Treatment Facilities Identified by the 304(m) 2014 Annual Review.	Centralized Waste Treaters	2	No	No	CWT00275
3.0	EPA-HQ-OW-2015-0665-0654	Wyoming Oil and Gas Conservation Commission (WY OGCC) Water Data Memorandum - Attachment 1: Raw Data from WY OGCC DCN CWT00363	Raw data from WY OGCC provided to ERG for analysis.	Data	WY OGCC	01/22/2015	WY OGCC. 2015. Wyoming Oil and Gas Conservation Commission (WY OGCC) Water Data Memorandum - Attachment 1: Raw Data from WY OGCC.	Centralized Waste Treaters	1	No	No	CWT00363
3.1	EPA-HQ-OW-2015-0665-0929	Proposed Approach for Data Analysis and Quality Assurance Using Drillinginfo's (DI) Desktop® Well File Database - DCN CWT00173	Memorandum that outlines the approach to using the DI Desktop Database	Memorandum	ERG	01/20/2016	ERG. 2016. Proposed Approach for Data Analysis and Quality Assurance Using Drillinginfo's (DI) Desktop® Well File Database.	Centralized Waste Treaters	7	No	No	CWT00173

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
3.1	EPA-HQ-OW-2015-0665-0931	Centralized Waste Treatment Facility List Comment from EPA Regions Memorandum DCN CWT00256	A memo summarizing comments from state pretreatment coordinators regarding an early draft of the CWT Facility List.	Memorandum	Eastern Research Group	02/22/2016	ERG. 2017. Centralized Waste Treatment Facility List Comment from EPA Regions Memorandum.	Centralized Waste Treaters	4	No	No	CWT00256
3.1	EPA-HQ-OW-2015-0665-0659	Proposed Approach for Data Analysis and Quality Assurance Using Drillinginfo's (DI) Desktop® Well File Database DCN CWT00368	Memorandum that outlines the approach to using the DI Desktop Database	Memorandum	ERG	01/20/2016	ERG. 2016. Proposed Approach for Data Analysis and Quality Assurance Using Drillinginfo's (DI) Desktop® Well File Database.	Centralized Waste Treaters	7	No	No	CWT00368
4.0	EPA-HQ-OW-2015-0665-0702	Baker Hughes: US Rig Count Ticks up 2 Units to 931 DCN CWT00390	Article reporting the US drilling rig count for the week ending December 8, 2017, based on data from Baker Hughes.	Publication; Copyrighted Material	OGJ Editors	12/08/2017	Oil and Gas Journal. 2017. "Baker Hughes: US Rig Count Ticks up 2 Units to 931." December 8, 2017. Accessed December 14, 2017. Available electronically at: <a href="http://www.ogj.com/articles/2017/12/baker-hughes">http://www.ogj.com/articles/2017/12/baker-hughes</a>	Centralized Waste Treaters	2	No	Yes	CWT00390

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4.0	EPA-HQ-OW-2015-0665-0704	Annual Energy Outlook 2017 DCN CWT00394	EIA's Annual Energy Outlook 2017 provides modeled projections of domestic energy markets through 2050, and includes cases with different assumptions of macroeconomic growth, world oil prices, technological progress, and energy policies.	Publication; Other Governmental	U.S. DOE	01/05/2017	United States Department of Energy (U.S. DOE). 2017a. Energy Information Administration (EIA). Annual Energy Outlook 2017. Available electronically at: <a href="https://www.eia.gov/outlooks/archives/aeo17/">https://www.eia.gov/outlooks/archives/aeo17/</a>	Centralized Waste Treaters	64	No	No	CWT00394
4.0	EPA-HQ-OW-2015-0665-0705	U.S. Dry Shale Gas Production DCN CWT00395	Estimated monthly dry shale gas production by play, derived from state administrative data. EIA defines shale gas as natural gas produced from wells that are open to shale formations. EIA defines dry natural gas production as the process of producing cons	Data	U.S. DOE	11/01/2017	United States Department of Energy (U.S. DOE). 2017b. Energy Information Administration (EIA). U.S. Dry Shale Gas Production. Accessed December 14, 2017. Available electronically at:	Centralized Waste Treaters	0	No	No	CWT00395
4.0	EPA-HQ-OW-2015-0665-0722	Annual Energy Outlook 2016 Figure Data: Figure MT-46 DCN CWT00396	U.S. dry natural gas production by source in the Reference case, from EIA's 2016 Annual Energy Outlook. Production sources are: shale gas and tight oil plays, tight gas, lower 48 offshore, coalbed methane, Alaska, and other.	Data	U.S. DOE	10/25/2016	United States Department of Energy (U.S. DOE). 2016a. Energy Information Administration (EIA). Annual Energy Outlook 2016 Figure Data: Figure MT-46. U.S. dry natural gas production by	Centralized Waste Treaters	0	No	No	CWT00396

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4.0	EPA-HQ-OW-2015-0665-0723	U.S Tight Oil Production Estimates: Monthly DCN CWT00400	Estimated monthly tight oil production derived from state administrative data. EIA defines tight oil as oil produced from petroleum-bearing formations with low permeability such as the Eagle Ford, the Bakken, and other formations that must be hydraulically	Data	U.S. DOE	04/01/2016	United States Department of Energy (U.S. DOE). 2016e. Energy Information Administration (EIA). U.S. Tight Oil Production Estimates: Monthly. Accessed April 27, 2016. Available	Centralized Waste Treaters	0	No	No	CWT00400
4.0	EPA-HQ-OW-2015-0665-0748	Economic and Financial Questionnaire DCN CWT00405	Blank financial and economic questionnaire sent to CWT facilities under authority of Section 308 of the Clean Water Act, soliciting financial information on items such as the business model of the facility and its ownership, operational and financial deci	Form	U.S. EPA	03/07/2016	United States Environmental Protection Agency (U.S. EPA). 2016. Blank 308 Questionnaire.	Centralized Waste Treaters	23	No	No	CWT00405
5	EPA-HQ-OW-2015-0665-1096	Nutrient Requirements of Beef Cattle DCN CWT00469	"The book clearly communicates the current state of beef cattle nutrient requirements and animal variation by visually presenting related data via computer-generated models."	Publication; Copyrighted Material	NRC	01/01/1996	NRC. 1996. Nutrient Requirements of Beef Cattle. 7th ed. National Research Council. National Academy Press, Washington, DC.	Centralized Waste Treaters	248	No	Yes	CWT00469

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
5	EPA-HQ-OW-2015-0665-0956	Shale gas development impacts on surface water quality in Pennsylvania DCN CWT00470	"This paper conducts a large-scale examination of the extent to which shale gas development activities affect surface water quality. Focusing on the Marcellus Shale in Pennsylvania, we estimate the effect of shale gas wells and the release of treated shal	Fact/Data Sheet	Olmstead, S.M., L.A. Muehlenbachs, J-S. Sh	03/26/2013	Olmstead, S.M., L.A. Muehlenbachs, J-S. Shih, Z. Chu, and A.J. Krupnick. 2013. Shale gas development impacts on surface water quality in Pennsylvania. Proc. Natl Acad. Sci. USA	Centralized Waste Treaters	6	No	Yes	CWT00470
5	EPA-HQ-OW-2015-0665-0955	Subject: Cause and Effect Survey. South Fork Tenmile Creek, Marcellus Shale Natural Gas Drilling Waste Water Treatment, Waynesburg Pennsylvania, Greene County, Stream Code 40293 DCN CWT00471	"The purpose of the aquatic biological investigation was to examine and determine if the Warren Wastewater Treatment Plant (WWTP) and Waste Treatment Corporation (WTC) discharges are having negative impacts on the Alleghany River. Benthic macroinvertebrat	Letter	PA DEP	02/02/2009	PA DEP. 2009. Subject: Cause and Effect Survey. South Fork Tenmile Creek, Marcellus Shale Natural Gas Drilling Waste Water Treatment, Waynesburg Pennsylvania, Greene County, Stream Code	Centralized Waste Treaters	55	No	No	CWT00471
5	EPA-HQ-OW-2015-0665-0954	Aquatic Biology Investigation DCN CWT00472	"The purpose of the aquatic biological investigation was to examine and determine if the Warren Wastewater Treatment Plant (WWTP) and Waste Treatment Corporation (WTC) discharges are having negative impacts on the Alleghany River. Benthic macroinvertebrat	Publication; Other Governmental	PA DEP	01/10/2013	PA DEP. 2013. Aquatic Biology Investigation. Report. Pennsylvania Department of Environmental Protection. January.	Centralized Waste Treaters	20	No	No	CWT00472

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
5	EPA-HQ-OW-2015-0665-0953	An Index of Biotic Integrity for Benthic Macroinvertebrate Communities in Pennsylvania's Wadeable, Freestone, Riffle-Run Streams DCN CWT00473	"The principal motivation for this project was to develop an index of biological integrity (IBI) for benthic macroinvertebrate communities in Pennsylvania's larger wadeable, freestone, riffle-run streams. This project builds on previous work to develop a	Publication; Other Governmental	PA DEP	01/01/2015	PA DEP. 2015. An Index of Biotic Integrity for Benthic Macroinvertebrate Communities in Pennsylvania's Wadeable, Freestone, Riffle-Run Streams. Pennsylvania Department of Environmental	Centralized Waste Treaters	22	No	No	CWT00473
5	EPA-HQ-OW-2015-0665-0952	Enhanced formation of disinfection byproducts in shale gas wastewater-impacted drinking water supplies DCN CWT00475	"This study evaluated the minimum volume percentage of two Marcellus Shale and one Fayetteville Shale HFWs diluted by fresh water collected from the Ohio and Allegheny Rivers that would generate and/or alter the formation and speciation of DBPs following	Publication; Copyrighted Material	Parker, K.M., T. Zeng, J. Harkness, A. Ven	09/09/2014	Parker, K.M., T. Zeng, J. Harkness, A. Vengosh, and W.A. Mitch. 2014. Enhanced formation of disinfection byproducts in shale gas wastewater-impacted drinking water supplies	Centralized Waste Treaters	9	No	Yes	CWT00475
5	EPA-HQ-OW-2015-0665-0951	Effects of high salinity wastewater discharges on unionid mussels in the Allegheny River, Pennsylvania DCN CWT00476	"We examined the effect of high salinity wastewater (brine) from oil and natural gas drilling on freshwater mussels in the Allegheny River, Pennsylvania, during 2012. Mussel cages (N = 5 per site) were deployed at two sites upstream and four sites downstr	Publication; Copyrighted Material	Patnode, K.A., E. Hittle, R.M. Anderson, L	06/01/2015	Patnode, K.A., E. Hittle, R.M. Anderson, L. Zimmerman, and J.W. Fulton. 2015. Effects of high salinity wastewater discharges on unionid mussels in the Allegheny River, Pennsylvania. Journal of Fish	Centralized Waste Treaters	16	No	Yes	CWT00476



RECORD SECTION	EPA DOCUMENT ID	TITLE	ABSTRACT	DOCUMENT TYPE	AUTHOR	AUTHOR DATE	SOURCE CITATION	CATEGORY INDUSTRY	PAGE	CBI	COPY - RIGHTED	DCN
5	EPA-HQ-OW-2015-0665-0950	Effects of Water Quality on Beef Cattle DCN CWT00477	"Field observations from our laboratory since 1999 have shown both surface and subsurface water to be high in total dissolved solids (TDS, an estimate of total salts) and sulfates. In the midst of drought conditions in 2002, we observed surface water with	Meeting or Teleconference Materials	Patterson, T. and P. Johnson	12/09/2003	Patterson, T. and P. Johnson. 2003. Effects of Water Quality on Beef Cattle. Proceedings, The Range Beef Cow Symposium XVII December 9, 10, and 11. University of Nebraska-Lincoln. Available:	Centralized Waste Treaters	9	No	No	CWT00477
5	EPA-HQ-OW-2015-0665-0949	Treatment Requirements for New and Expanding Mass Loadings of Total Dissolved Solids (TDS) DCN CWT00478	"The following are not considered new and expanding mass loadings of TDS and are exempt from the treatment requirements in this section: (1) Maximum daily discharge loads of TDS or specific conductivity levels that were authorized by the Department pr	Guidance, Interpretation, Policy, Procedure	Pennsylvania Code	08/21/2010	Pennsylvania Code. 2011. § 95.10. Treatment Requirements for New and Expanding Mass Loadings of Total Dissolved Solids (TDS). Available: <a href="http://www.pacode.com/secure/data/025/chapter95/">http://www.pacode.com/secure/data/025/chapter95/</a>	Centralized Waste Treaters	4	No	No	CWT00478
5	EPA-HQ-OW-2015-0665-0948	Effect of bromide ion on formation of HAAs during chlorination DCN CWT00479	"A two-block full-factorial matrix was designed to statistically evaluate the influence of bromide ion on the formation and speciation of haloacetic acids (HAAs) during chlorination and the effects of independent variables, including pH, reaction time, an	Publication; Copyrighted Material	Pourmoghaddas, H., A.A. Stevens, R.N. Kinm	01/01/1993	Pourmoghaddas, H., A.A. Stevens, R.N. Kinman, R.C. Dressman, L.A. Moore, and J.C. Ireland. 1993. Effect of bromide ion on formation of HAAs during chlorination. Journal American Water	Centralized Waste Treaters	6	No	Yes	CWT00479

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5	EPA-HQ-OW-2015-0665-0947	Wastewater management and Marcellus shale gas development: Trends, drivers, and planning implications DCN CWT00480	"Here we examine wastewater management practices and trends for this shale play through analysis of industry-reported, publicly available data collected from the Pennsylvania Department of Environmental Protection Oil and Gas Reporting Website. We also an	Publication; Copyrighted Material	Rahm, B.G., J.T. Bates, L.R. Bertoia, A.E.	03/15/2013	Rahm, B.G., J.T. Bates, L.R. Bertoia, A.E. Galford, D.A. Yoxtheimer, and S.J. Riha. 2013. Wastewater management and Marcellus shale gas development: Trends, drivers, and planning implications	Centralized Waste Treaters	9	No	Yes	CWT00480
5	EPA-HQ-OW-2015-0665-0946	Water Quality for Wyoming Livestock and Wildlife. A Review of the Literature Pertaining to the Health Effects of Inorganic Contaminants DCN CWT00481	"This report, and the project that created it, was funded by the Wyoming Department of Environmental Quality. Although the authors anticipate they will find the information useful, our intended audience is much broader and includes ranchers, wildlife mana	Study	Raisbeck, M.F., S.L. Riker, C.M. Tate, R.	01/01/2008	Raisbeck, M.F., S.L. Riker, C.M. Tate, R. Jackson, M.A. Smith, K.J. Reddy, and J.R. Zygmunt. 2008. Water Quality for Wyoming Livestock and Wildlife. A Review of the Literature Pertaining to the	Centralized Waste Treaters	100	No	No	CWT00481
5	EPA-HQ-OW-2015-0665-0945	Estimating potential increased bladder cancer risk due to increased bromide concentrations in sources of disinfected drinking water DCN CWT00482	"We estimate bladder cancer risk from potential increased bromide levels in source waters of disinfecting public drinking water systems in the United States. Bladder cancer is the health end point used by the United States Environmental Protection Agency	Publication; Copyrighted Material	Regli, S., J. Chen, M. Messner, M. Elovitz	10/21/2015	Regli, S., J. Chen, M. Messner, M. Elovitz, F. Letkiewicz, R. Pegram, T. Pepping, S. Richardson, and J. Wright. 2015. Estimating potential increased bladder cancer risk due to	Centralized Waste Treaters	9	No	Yes	CWT00482

RECORD SECTION	EPA DOCUMENT ID	TITLE	ABSTRACT	DOCUMENT TYPE	AUTHOR	AUTHOR DATE	SOURCE CITATION	CATEGORY INDUSTRY	PAGE	CBI	COPY - RIGHTED	DCN
5	EPA-HQ-OW-2015-0665-0944	Occurrence, genotoxicity, and carcinogenicity of regulated and emerging disinfection by-products in drinking water: A review and roadmap for research DCN CWT00483	"Our analysis identified three categories of DBPs of particular interest. Category 1 contains eight DBPs with some or all of the toxicologic characteristics of human carcinogens: four regulated (bromodichloromethane, dichloroacetic acid, dibromoacetic aci	Publication; Copyrighted Material	Richardson, S.D., M.J. Plewa, E.D. Wagner,	01/01/2007	Richardson, S.D., M.J. Plewa, E.D. Wagner, R. Schoeny, and D.M. DeMarini. 2007. Occurrence, genotoxicity, and carcinogenicity of regulated and emerging disinfection by-products in	Centralized Waste Treaters	65	No	Yes	CWT00483
5	EPA-HQ-OW-2015-0665-0943	Water pollution risk associated with natural gas extraction from the Marcellus shale DCN CWT00485	"Using probability bounds analysis, we assessed the likelihood of water contamination from natural gas extraction in the Marcellus Shale. Probability bounds analysis is well suited when data are sparse and parameters highly uncertain. The study model iden	Publication; Copyrighted Material	Rozell, D.J. and S.J. Reaven	01/01/2012	Rozell, D.J. and S.J. Reaven. 2012. Water pollution risk associated with natural gas extraction from the Marcellus shale. Risk Analysis 32(8):1382–1393 . doi: 10.1111/j.1539-6024.2011.01757	Centralized Waste Treaters	12	No	Yes	CWT00485
5	EPA-HQ-OW-2015-0665-0942	Effects of Total Dissolved Solids on Aquatic Organisms: A Literature Review. Technical Report No. 01-06 DCN CWT00486	"Total dissolves solids (TDS) are naturally present in water or are the result of mining or some industrial treatment of water. TDS contain minerals and organic molecules that provide benefits such as nutrients or contaminants such as toxic metals and org	Publication; Other Governmental	Scannell, P.W. and L.L. Jacobs	06/01/2011	Scannell, P.W. and L.L. Jacobs. 2001. Effects of Total Dissolved Solids on Aquatic Organisms: A Literature Review. Technical Report No. 01-06. Alaska Department of Fish and Game	Centralized Waste Treaters	68	No	No	CWT00486

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
5	EPA-HQ-OW-2015-0665-0941	Ecology of a saline stream: Community responses to spatial gradients of environmental conditions DCN CWT00487	"Spatial changes in structural and functional characteristics of fish and macroinvertebrate communities in eastern Kentucky were investigated in a drainage system chronically exposed to high levels of chloride salts from nearby oilfield operations. Salini	Publication; Copyrighted Material	Short, T., J. Black, and W. Birge	03/20/1991	Short, T., J. Black, and W. Birge. 1991. Ecology of a saline stream: Community responses to spatial gradients of environmental conditions. Hydrobiologia 226:167-178.	Centralized Waste Treaters	12	No	Yes	CWT00487
5	EPA-HQ-OW-2015-0665-0940	Hazard Identification for Human and Ecological Effects of Sodium Chloride Road Salt. I-93 Chloride TMDL Study. DCN CWT00488	"This paper presents a synthesis and interpretation of available literature on the effects of both sodium chloride roadsalt, including those of the sodium cation and chloride anion in the dissolved phase, on humans, wildlife, aquatic life, and vegetation	Publication; Other Governmental	Sigel, L	07/06/2007	Sigel, L. 2007. Hazard Identification for Human and Ecological Effects of Sodium Chloride Road Salt. I-93 Chloride TMDL Study. New Hampshire Department of Environmental Services	Centralized Waste Treaters	19	No	No	CWT00488
5	EPA-HQ-OW-2015-0665-0939	Surface disposal of produced waters in western and southwestern Pennsylvania: Potential for accumulation of alkali-earth elements in sediments DCN CWT00489	"Waters co-produced with hydrocarbons in the Appalachian Basin are of notably poor quality (concentrations of total dissolved solids (TDS) and total radium up to and exceeding 300,000 mg/L and 10,000 pCi/L, respectively). Since 2008, a rapid increase in M	Publication; Copyrighted Material	Skalak, K.J., M.A. Engle, E.L. Rowan, G.D.	12/12/2013	Skalak, K.J., M.A. Engle, E.L. Rowan, G.D. Jolly, K.M. Conko, A.J. Benthem, and T.F. Kraemer. 2014. Surface disposal of produced waters in western and southwestern Pennsylvania: Potential for	Centralized Waste Treaters	9	No	Yes	CWT00489

RECORD SECTION	EPA DOCUMENT ID	TITLE	ABSTRACT	DOCUMENT TYPE	AUTHOR	AUTHOR DATE	SOURCE CITATION	CATEGORY INDUSTRY	PAGE	CBI	COPY - RIGHTED	DCN
5	EPA-HQ-OW-2015-0665-0938	Marcellus shale drilling and brominated THMs in Pittsburgh, Pa., drinking water DCN CWT00490	"In an effort to explain these changes, PWSA and the University of Pittsburgh's Swanson School of Engineering investigated bromide concentrations in the Allegheny River (PWSA's source water) and THM formation in PWSA's drinking water. Results of the inves	Publication; Copyrighted Material	States, S., G. Cyprych, M. Stoner, F. Wydr	05/03/2013	States, S., G. Cyprych, M. Stoner, F. Wydra, J. Kuchta, J. Monnell, and L. Casson. 2013. Marcellus shale drilling and brominated THMs in Pittsburgh, Pa., drinking water. Journal	Centralized Waste Treaters	17	No	Yes	CWT00490
5	EPA-HQ-OW-2015-0665-0960	Fourth Quarter 2000 Report for ASTF Grant #98-012. Project: Salmon as a Bioassay Model of Effects of Total Dissolved Solids DCN CWT00491	Fourth Quarter 2000 Report for ASTF Grant #98-012. Project: Salmon as a Bioassay Model of Effects of Total Dissolved Solids	Study	Stekoll, M., W. Smoker, I. Wang, and B. Fa	01/01/2001	Stekoll, M., W. Smoker, I. Wang, and B. Failor. 2001. Fourth Quarter 2000 Report for ASTF Grant #98-012. Project: Salmon as a Bioassay Model of Effects of Total Dissolved Solids. January 17	Centralized Waste Treaters	2	No	No	CWT00491
5	EPA-HQ-OW-2015-0665-0961	The influence of certain electrolytes on the induction of sperm motility in rainbow trout ( <i>Salmo gairdneri</i> ) DCN CWT00492	"Complementing earlier studies concerning the effect of the addition of different fluids to freshly collected trout milt (Holtz et al., 1977) the specific effect of certain minerals was investigated. Activation of spermatozoa normally occurring upon dilut	Publication; Copyrighted Material	Stoss, V.J., S. Buyukhatipoglu, and W. Hol	01/01/1977	Stoss, V.J., S. Buyukhatipoglu, and W. Holtz. 1977. The influence of certain electrolytes on the induction of sperm motility in rainbow trout ( <i>Salmo gairdneri</i> ). Zuchthyg 12:172-184	Centralized Waste Treaters	7	No	Yes	CWT00492

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5	EPA-HQ-OW-2015-0665-0937	Physical, chemical, and biological characteristics of compounds used in hydraulic fracturing DCN CWT00493	"Hydraulic fracturing (HF), a method to enhance oil and gas production, has become increasingly common throughout the U.S. As such, it is important to characterize the chemicals found in HF fluids to evaluate potential environmental fate, including fate i	Publication; Copyrighted Material	Stringfellow, W.T., J.K. Domen, M.K. Camar	04/25/2014	Stringfellow, W.T., J.K. Domen, M.K. Camarillo, W.L. Sandelin, and S. Borglin. 2014. Physical, chemical, and biological characteristics of compounds used in hydraulic fracturing. Journal of	Centralized Waste Treaters	18	No	Yes	CWT00493
5	EPA-HQ-OW-2015-0665-0936	Biodegradation in waters from hydraulic fracturing: chemistry, microbiology, and engineering DCN CWT00494	"This paper begins to address the microbial composition and aqueous chemistry and the potential for intrinsic and enhanced bioremediation of these waters. The waters from a gas and oil shale in the Marcellus and Bakken regions, respectively, were analyzed	Publication; Copyrighted Material	Strong, L., T. Gould, L. Kasinkas, M. Sado	01/01/2013	Strong, L., T. Gould, L. Kasinkas, M. Sadowsky, A. Aksan, and L. Wacektt. 2013. Biodegradation in waters from hydraulic fracturing: chemistry, microbiology, and engineering. J Environ Eng	Centralized Waste Treaters	9	No	Yes	CWT00494
5	EPA-HQ-OW-2015-0665-0935	Radium geochemistry of ground waters in Paleozoic carbonate aquifers, midcontinent, USA DCN CWT00495	"The purpose of this study was to elucidate the processes controlling the distribution and behavior of the longer-lived Ra isotopes in continuous Paleozoic carbonate aquifers of parts of Missouri, Kansas, and Oklahoma. Activities of (228Ra) and (226Ra) we	Publication; Copyrighted Material	Sturchio, N., J. Banner, C. Binz, L. Herat	12/03/1999	Sturchio, N., J. Banner, C. Binz, L. Heraty, and M. Musgrove. 2001. Radium geochemistry of ground waters in Paleozoic carbonate aquifers, midcontinent, USA. Applied Geochemistry 16:100-122	Centralized Waste Treaters	14	No	Yes	CWT00495

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5	EPA-HQ-OW-2015-0665-0934	Environmental Issues Surrounding Shale Gas Production. The U.S. Experience, a Primer. International Gas Union DCN CWT00496	"Shale gas development is receiving a great deal of public scrutiny and the debate over the environmental impact of this new technology has raised some genuinely important issues. Environmentalists claim the process could contaminate rivers and aquifers a	Report	Thorn, T.H	04/01/2012	Thorn, T.H. 2012. Environmental Issues Surrounding Shale Gas Production. The U.S. Experience, a Primer. International Gas Union. April. Available: <a href="http://newgas.org/us/sites/default/f">http://newgas.org/us/sites/default/f</a>	Centralized Waste Treaters	68	No	No	CWT00496
5	EPA-HQ-OW-2015-0665-0932	Major ion toxicity of six produced waters to three freshwater species: Application of ion toxicity models and TIE procedures DCN CWT00497	"Previous research to characterize the acute toxicity of major ions to freshwater organisms resulted in the development of statistical toxicity models for three freshwater species (Ceriodaphnia dubia, Pimephales promelas, and Daphnia magna). These ion tox	Publication; Copyrighted Material	Tietge, J.E., J.R. Hockett, and J.E. Evans	01/01/1997	Tietge, J.E., J.R. Hockett, and J.E. Evans. 1997. Major ion toxicity of six produced waters to three freshwater species: Application of ion toxicity models and TIE procedures. Environmental	Centralized Waste Treaters	7	No	Yes	CWT00497
5	EPA-HQ-OW-2015-0665-0930	Influence of saline drinking water on mineral balances in sheep DCN CWT00498	"The influence of sodium chloride ingestion via the drinking water upon the mineral balance in sheep has been examined. Four Merino ewes were offered rainwater containing zero, 0.8, or 1.3 % sodium chloride as the only source of drinking water. After corr	Publication	Tomas, F.M., G.B. Jones, B.J. Potter, and	01/01/1973	Tomas, F.M., G.B. Jones, B.J. Potter, and G.L. Langsford. 1973. Influence of saline drinking water on mineral balances in sheep. Aust J Agric Res 24:377-386.	Centralized Waste Treaters	10	No	Yes	CWT00498

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5	EPA-HQ-OW-2015-0665-0928	Salt in our streams: Even small sodium additions can have negative effects on detritivores DCN CWT00499	"We manipulated NaCl levels in microcosms containing just sweetgum (Liquidambar styraciflua L.) leaves with associated microbes, or leaves, microbes, and one of two macroinvertebrate detritivores (Tipula abdominalis Say in Experiment I and Lirceus sp. in	Publication; Copyrighted Material	Tyree, M., N. Clay, S. Polaskey, and S. En	03/04/2016	Tyree, M., N. Clay, S. Polaskey, and S. Entekin. 2016. Salt in our streams: Even small sodium additions can have negative effects on detritivores. Hydrobiologia 775(1):109-122.	Centralized Waste Treaters	14	No	Yes	CWT00499
5	EPA-HQ-OW-2015-0665-0927	Radionuclides Rule: A Quick Reference Guide. EPA 816-F-01-003 DCN CWT00500	Document is reference guide for the EPA radionuclides rule 66 FR 76708 December 7, 2000 Vol. 65, No.226	Publication; USEPA	U.S. EPA	06/01/2001	U.S. EPA. 2001. Radionuclides Rule: A Quick Reference Guide. EPA 816-F-01-003. U.S. Environmental Protection Agency, Office of Water. June. Available: <a href="https://nepis.epa.gov/Exe/ZyPDF.c">https://nepis.epa.gov/Exe/ZyPDF.c</a> <a href="https://nepis.epa.gov/Exe/ZyPDF.c">https://nepis.epa.gov/Exe/ZyPDF.c</a> ?i=2&DocKey=3000	Centralized Waste Treaters	2	No	No	CWT00500
5	EPA-HQ-OW-2015-0665-0926	Radionuclides in Drinking Water. Reverse Osmosis DCN CWT00502	Website provides an overview of "reverse osmosis is a pressure-driven membrane separation process. Water is forced through a membrane with small pores by pressures ranging from 100 to 150 psi. Any molecules larger than the pore openings are excluded from	Publication; USEPA	U.S. EPA	01/01/2013	U.S. EPA. 2013. Radionuclides in Drinking Water. Reverse Osmosis. U.S. Environmental Protection Agency. Available: <a href="http://cfpub.epa.gov/safewater/radionuclides/radionuclides.cfm?action=Rad_Reverse%2">http://cfpub.epa.gov/safewater/radionuclides/radionuclides.cfm?action=Rad_Reverse%</a>	Centralized Waste Treaters	3	No	No	CWT00502



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5	EPA-HQ-OW-2015-0665-0925	Environmental Assessment for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category. EPA-821-R-15-006 DCN CWT00503	"The U.S. Environmental Protection Agency (EPA) is promulgating revised effluent limitations guidelines and standards (ELGs) for the Steam Electric Power Generating Point Source Category (40 CFR 423). In support of the development of the final rule, EPA c	Publication; USEPA	U.S. EPA	09/01/2015	U.S. EPA. 2015a. Environmental Assessment for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category. EPA-821-R-15-006	Centralized Waste Treaters	513	No	No	CWT00503
5	EPA-HQ-OW-2015-0665-1059	Sources Contributing Inorganic Species to Drinking Water Intakes During Low Flow Conditions on the Alleghany River in Western Pennsylvania. EPA/600/R-14/430 DCN CWT00504	"This report, Sources Contributing Inorganic Species to Drinking Water Intakes during Low Flow Conditions on the Allegheny River in Western Pennsylvania, is the product of one of the research projects conducted as part of the EPA's study. It has undergone	Publication; USEPA	U.S. EPA	05/01/2015	U.S. EPA. 2015b. Sources Contributing Inorganic Species to Drinking Water Intakes During Low Flow Conditions on the Alleghany River in Western Pennsylvania. EPA/600/R-14/430	Centralized Waste Treaters	89	No	No	CWT00504
5	EPA-HQ-OW-2015-0665-0910	Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States. EPA-600-R-16-236ES. Executive Summary DCN CWT00505	"This final report provides a review and synthesis of available scientific information concerning the relationship between hydraulic fracturing activities and drinking water resources in the United States."	Publication; USEPA	U.S. EPA	12/01/2016	U.S. EPA. 2016a. Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States. EPA-600-R-16-236ES. Executive	Centralized Waste Treaters	666	No	No	CWT00505

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5		National Primary Drinking Water Standards DCN CWT00506	"EPA identifies contaminants to regulate in drinking water to protect public health. The Agency sets regulatory limits for the amounts of certain contaminants in water provided by public water systems. These contaminant standards are required by the Safe	Publication; USEPA	U.S. EPA	01/01/2016	U.S. EPA. 2016b. National Primary Drinking Water Standards. U.S. EPA, OW.	Centralized Waste Treaters	3	No	No	CWT00506
5	EPA-HQ-OW-2015-0665-0909	National Recommended Water Quality Criteria – Aquatic Life Criteria Table DCN CWT00508	"This table contains the most up to date criteria for aquatic life ambient water quality criteria. Aquatic life criteria for toxic chemicals are the highest concentration of specific pollutants or parameters in water that are not expected to pose a signi	Publication; USEPA	U.S. EPA	01/01/2017	U.S. EPA. 2017. National Recommended Water Quality Criteria – Aquatic Life Criteria Table. U.S. Environmental Protection Agency. Available: <a href="https://www.epa.gov/wqc/national">https://www.epa.gov/wqc/national</a>	Centralized Waste Treaters	21	No	No	CWT00508
5	EPA-HQ-OW-2015-0665-0908	Water Quality Studied in Areas of Unconventional Oil and Gas Development, Including Areas where Hydraulic Fracturing Techniques are Used, in the United States. Fact Sheet DCN CWT00509	"The U.S. Geological Survey (USGS) John Wesley Powell Center for Analysis and Synthesis is hosting an interdisciplinary working group of USGS scientists to conduct a temporal and spatial analysis of surface-water and groundwater quality in areas of uncon	Publication; Other Governmental	USGS	04/01/2012	USGS. 2012 Water Quality Studied in Areas of Unconventional Oil and Gas Development, Including Areas where Hydraulic Fracturing Techniques are Used, in the United States. Fact Sheet 2012	Centralized Waste Treaters	4	No	No	CWT00509

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5	EPA-HQ-OW-2015-0665-0907	Impact of shale gas development on water resources: A case study in northern Poland DCN CWT00510	"In this study, we focussed on the potential impacts on regional water resources within the Baltic Basin in Poland, both in terms of quantity and quality. The future development of the shale play was modeled for the time period 2015–2030 using the LUISA m	Publication; Copyrighted Material	Vandecasteele, I., I.M. Rivero, S. Sala, C	04/16/2015	Vandecasteele, I., I.M. Rivero, S. Sala, C. Baranzelli, R. Barranco, O. Batelaan, and C. Lavallo. 2015. Impact of shale gas development on water resources: A case study in northern Poland. Environmental	Centralized Waste Treaters	15	No	Yes	CWT00510
5	EPA-HQ-OW-2015-0665-0906	A critical review of the risks to water resources from unconventional shale gas development and hydraulic fracturing in the United States DCN CWT00511	"This paper provides a critical review of the potential risks that shale gas operations pose to water resources, with an emphasis on case studies mostly from the U.S. Four potential risks for water resources are identified: (1) the contamination of shallo	Publication; Copyrighted Material	Vengosh, A., R.B. Jackson, N. Warner, T.H.	03/07/2014	Vengosh, A., R.B. Jackson, N. Warner, T.H. Darrah, and A. Kondash. 2014. A critical review of the risks to water resources from unconventional shale gas development and hydraulic fracturing in the	Centralized Waste Treaters	15	No	Yes	CWT00511
5	EPA-HQ-OW-2015-0665-0905	Impact of shale gas development on regional water quality DCN CWT00512	"Unconventional natural gas resources offer an opportunity to access a relatively clean fossil fuel that could potentially lead to energy independence for some countries. Horizontal drilling and hydraulic fracturing make the extraction of tightly bound na	Publication; Copyrighted Material	Vidic, R.D., S.L. Brantley, J.M. Vandenbos	05/17/2013	Vidic, R.D., S.L. Brantley, J.M. Vandenbossche, D. Yoxtheimer, and J.D. Abad. 2013. Impact of shale gas development on regional water quality. Science 340(6134), 1235009. Available: <a href="http://doi.org/10.1126/science.1235009">http://doi.org/10.1126/science.1235009</a>	Centralized Waste Treaters	11	No	Yes	CWT00512

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5	EPA-HQ-OW-2015-0665-0904	Assessing the risk associated with increasing bromide in drinking water sources in the Monongahela River, Pennsylvania DCN CWT00514	"This study presents a statistical simulation model to evaluate the effect of the increasing source-water bromide on THM formation and speciation and analyzes the changing risks (by using cancer slope factors) in treated water from 2010 to 2012. Even very	Publication; Copyrighted Material	Wang, Y., M.J. Small, and J.M. VanBriesen	10/31/2016	Wang, Y., M.J. Small, and J.M. VanBriesen. 2016. Assessing the risk associated with increasing bromide in drinking water sources in the Monongahela River, Pennsylvania. J. Environ. Eng.	Centralized Waste Treaters	10	No	Yes	CWT00514
5	EPA-HQ-OW-2015-0665-0903	Scenario analysis of the impact on drinking water intakes from bromide in the discharge of treated oil and gas wastewater DCN CWT00516	This study used data from commercial wastewater treatment plants and river flow data in western Pennsylvania to construct generic discharge scenarios that illustrate the potential impacts from disposal of five classes of water that were developed from flo	Publication; Copyrighted Material	Weaver, J.S., J. Xu, and S.C. Mravik	08/13/2015	Weaver, J.S., J. Xu, and S.C. Mravik. 2016. Scenario analysis of the impact on drinking water intakes from bromide in the discharge of treated oil and gas wastewater. Journal of Environmental	Centralized Waste Treaters	14	No	Yes	CWT00516
5	EPA-HQ-OW-2015-0665-0902	Effects of total dissolved solids on aquatic organisms: A review of literature and recommendations for salmonid species DCN CWT00517	"Total dissolves solids (TDS) are naturally present in water or are the result of mining or some industrial treatment of water. TDS contain minerals and organic molecules that provide benefits such as nutrients or contaminants such as toxic metals and org	Publication; Copyrighted Material	Weber-Scannell, P. and L. Duffy	01/01/2007	Weber-Scannell, P. and L. Duffy. 2007. Effects of total dissolved solids on aquatic organisms: A review of literature and recommendations for salmonid species. American Journal of Environmental	Centralized Waste Treaters	6	No	Yes	CWT00517

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5	EPA-HQ-OW-2015-0665-0901	Reactivity of natural organic matter with aqueous chlorine and bromine DCN CWT00518	"Experiments with model compounds and natural waters indicated more efficient substitution reactions with bromine than chlorine. Kinetic experiments with NOM isolates with and without pre-ozonation were conducted to obtain second-order rate constants (k)	Publication; Copyrighted Material	Westerhoff, P., P. Chao, and H. Mash	01/01/2004	Westerhoff, P., P. Chao, and H. Mash. 2004. Reactivity of natural organic matter with aqueous chlorine and bromine. Water Res. 38(6):1502-1513	Centralized Waste Treaters	12	No	Yes	CWT00518
5	EPA-HQ-OW-2015-0665-0900	Total dissolved solids in drinking-water DCN CWT00519	"Since the first edition of the WHO Guidelines for drinking-water quality GDWQ, WHO has published information on health criteria and other supporting information to the GDWQ, describing the approaches used in deriving guideline values and presenting criteria	Publication; Other Governmental	WHO	01/01/1996	WHO. 1996. Total dissolved solids in drinking-water. In Guidelines for Drinking-Water Quality, 2nd ed. Vol. 2. Health Criteria and Other Supporting Information. WHO/SDE/WSH/03.04/16. World	Centralized Waste Treaters	94	No	No	CWT00519
5	EPA-HQ-OW-2015-0665-0899	Sources of high total dissolved solids to drinking water supply in southwestern Pennsylvania DCN CWT00520	"Since the first edition of the WHO Guidelines for drinking-water quality GDWQ, WHO has published information on health criteria and other supporting information to the GDWQ, describing the approaches used in deriving guideline values and presenting criteria	Publication; Copyrighted Material	Wilson, J., Y. Wang, and J. VanBriesen	05/11/2013	Wilson, J., Y. Wang, and J. VanBriesen. 2014. Sources of high total dissolved solids to drinking water supply in southwestern Pennsylvania. Journal of Environmental Engineering 140(5):1-10	Centralized Waste Treaters	11	No	Yes	CWT00520

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5	EPA-HQ-OW-2015-0665-0898	Oil and gas produced water management and surface drinking water sources in Pennsylvania DCN CWT00521	"The present study evaluates produced water management in Pennsylvania from 2006 through 2011 to determine whether surface water discharges were sufficient to cause salt or bromide loads that would negatively affect drinking water sources. The increase in	Publication; Copyrighted Material	Wilson, J.M. and J.M. VanBriesen	12/01/2012	Wilson, J.M. and J.M. VanBriesen. 2012. Oil and gas produced water management and surface drinking water sources in Pennsylvania. Environmental Practice 11(December):28	Centralized Waste Treaters	13	No	Yes	CWT00521
5	EPA-HQ-OW-2015-0665-0897	Treatment of hypersaline wastewater in the sequencing batch reactor DCN CWT00522	"In this paper, studies were conducted with a moderate halophile isolated from the Great Salt Lake, Utah, U.S.A. The organism was able to degrade phenol in a simulated oil field produced water containing 15% salt if iron, nitrogen and phosphorus were adde	Publication; Copyrighted Material	Woolard C.R. and R.L. Irvine	01/01/1995	Woolard C.R. and R.L. Irvine. 1995. Treatment of hypersaline wastewater in the sequencing batch reactor. Wat. Res. 29(4):1159-1168	Centralized Waste Treaters	10	No	Yes	CWT00522
5	EPA-HQ-OW-2015-0665-0896	Fate of radium in Marcellus Shale flowback water impoundments and assessment of associated health risks - DCN CWT00523	"The fate of Ra-226, which is the dominant NORM component in flowback water, in three centralized storage impoundments in southwestern Pennsylvania was investigated during a 2.5-year period. Field sampling revealed that Ra-226 concentration in these stora	Publication; Copyrighted Material	Zhang, T., R.W. Hammack, and R.D. Vidic	01/01/2015	Zhang, T., R.W. Hammack, and R.D. Vidic. 2015. Fate of radium in Marcellus Shale flowback water impoundments and assessment of associated health risks. Environ. Sci. Technol. 49(15):9347-9354	Centralized Waste Treaters	8	No	Yes	CWT00523

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5	EPA-HQ-OW-2015-0665-0895	Desalinization of running waters III. Changes in the structure of diatom assemblages caused by a decreasing salt load and changing ion spectra in the river Wipper (Thuringia, Germany) - DCN CWT00524	"An ecological assessment of the changes was performed based on the halobion index calculated from all the samples. For the strongly salinized section of the river Wipper, a shift from $\alpha$ -mesohalobic/polyhalobic conditions in 1963/64 and 1986 to $\alpha$ -oligohal	Publication; Copyrighted Material	Ziemann, H., L. Kies, and C.-J. Schulz	01/28/2001	Ziemann, H., L. Kies, and C.-J. Schulz. 2001. Desalinization of running waters III. Changes in the structure of diatom assemblages caused by a decreasing salt load and changing ion spectra in the	Centralized Waste Treaters	0	No	Yes	CWT00524
5	EPA-HQ-OW-2015-0665-0894	Final Report – Water Quality Literature Review and Field Monitoring of Active Shale Gas Wells. Phase I for “Assessing Environmental Impacts of Horizontal Gas Well Drilling Operations DCN CWT00525	"This report summarizes the results of the phase II portion of the study, Water Quality Literature Review and Field Monitoring of Active Shale Gas Wells. Phase II consisted of: 1) hydrogeological testing and monitoring of the perimeter groundwater monitor	Study	Ziemkiewicz, P., J. Hause, B. Gutta, J. Fi	02/15/2013	Ziemkiewicz, P., J. Hause, B. Gutta, J. Fillhart, B. Mack, and M. O'Neal. 2013. Final Report – Water Quality Literature Review and Field Monitoring of Active Shale Gas Wells. Phase I for “Assessing	Centralized Waste Treaters	141	No	No	CWT00525
5	EPA-HQ-OW-2015-0665-0893	Characterization of liquid waste streams from shale gas development - DCN CWT00526	"In order to better understand risks associated with shale gas development, the West Virginia Legislature in May 2012 requested the West Virginia University Water Research Institute to investigate the health implications of liquid wastes related to horizo	Publication; Copyrighted Material	Ziemkiewicz, P.F	01/01/2013	Ziemkiewicz, P.F. 2013. Characterization of liquid waste streams from shale gas development. AGH Drilling, Oil, Gas 30(1):297–309.	Centralized Waste Treaters	13	No	Yes	CWT00526

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5	EPA-HQ-OW-2015-0665-0892	Salinisation of inland waters - DCN CWT00527	"Salinisation is caused by natural factors (e.g. the soil types of catchment areas, atmospheric deposition and climate) and by anthropogenic activities (e.g. agriculture and mining). Some of the consequences are an increase of salt content, and the enrich	Publication; Copyrighted Material	Zimmermann-Timm, H	01/01/2007	Zimmermann-Timm, H. 2007. Salinisation of inland waters. In Water Uses and Human Impacts on the Water Budget, J. Lozan, H. Graßl, P. Hupfer, L. Menzel, and C. Schönwiese (eds.). Verlag Wissenschaftlich	Centralized Waste Treaters	4	No	Yes	CWT00527
5.0	EPA-HQ-OW-2015-0665-0651	Impacts of Shale Gas Wastewater Disposal on Water Quality in Western Pennsylvania - DCN CWT00360	This paper examines water quality and isotopic compositions of discharged effluents, surface waters, and stream sediments associated with treatment facilities in western Pennsylvania.	Publication; Copyrighted Material	Warner, Nathaniel; Cidney, Christie; Jacks	09/10/2013	Warner et al. 2013. Impacts of Shale Gas Wastewater Disposal on Water Quality in Western PA. Environmental Science & Technology 47(20):11849–11857	Centralized Waste Treaters	9	No	Yes	CWT00360
5.0	EPA-HQ-OW-2015-0665-0749	Draft Summary of Total Dissolved Solids Impacts to Water Quality Uses. Memorandum to T. Born (EPA) dated April 10. DCN CWT00408	"The United States Environmental Protection Agency (EPA) is considering regulating shale gas extraction (SGE) under the Clean Water Act (CWA) to reduce pollutant loads and discharges resulting from production of SGE wastewaters.1 Waters with excessive tot	Memorandum	Abt Associates	04/10/2013	Abt Associates. 2013. Draft Summary of Total Dissolved Solids Impacts to Water Quality Uses. Memorandum to T. Born (EPA) dated April 10. Abt Associates, Cambridge, MA.	Centralized Waste Treaters	13	No	No	CWT00408



RECORD SECTION	EPA DOCUMENT ID	TITLE	ABSTRACT	DOCUMENT TYPE	AUTHOR	AUTHOR DATE	SOURCE CITATION	CATEGORY INDUSTRY	PAGE	CBI	COPY - RIGHTED	DCN
5.0	EPA-HQ-OW-2015-0665-0750	Draft Environmental Assessment Literature Review for Centralized Waste Treatment (CWT) Detailed Study. Memorandum to T. Born (EPA) dated June 20. DCN CWT00409	"Abt Associates ("Abt") conducted an Environmental Assessment Literature Review ("literature review") to aid EPA in assessing potential surface water impacts of oil and gas wastewater treated and discharged by CWTs. Abt researched and obtained relevant av	Memorandum	Abt Associates	06/20/2015	Abt Associates. 2015. Draft Environmental Assessment Literature Review for Centralized Waste Treatment (CWT) Detailed Study. Memorandum to T. Born (EPA) dated June 20.	Centralized Waste Treaters	25	No	No	CWT00409
5.0	EPA-HQ-OW-2015-0665-0751	Final Memorandum for CWT Discharge Environmental Data Collection - Task 8.2: Residuals. [Work Assignment No. 2-06; Amendment 2, EPA Contract No. EP-C-13-039]. Memorandum to K. Milam, E. Trentacoste, and J. Pritts, U.S. EPA, dated July 21. DCN CWT00410	This memorandum provides information on the levels of radionuclides and/or radioactivity reported in effluent discharged from CWT facilities accepting O&G wastes, as available from Discharge Monitoring Reports (DMRs). These levels are to be evaluated rega	Memorandum	Abt Associates	07/20/2016	Abt Associates. 2016. Final Memorandum for CWT Discharge Environmental Data Collection - Task 8.2: Residuals. [Work Assignment No. 2-06; Amendment 2, EPA Contract	Centralized Waste Treaters	12	No	No	CWT00410
5.0	EPA-HQ-OW-2015-0665-0848	Irrigation Water Quality Standards and Salinity Management Strategies. B-1667 4-03. DCN CWT00411	Document provides a summary of irrigation water quality standards and salinity management strategies focused superficially on Texas agricultural lands.	Guidance, Interpretation, Policy, Procedure	AgriLife Extension	05/08/2003	AgriLife Extension. 2003. Irrigation Water Quality Standards and Salinity Management Strategies. B-1667 4-03. Texas A&M System, College Station, TX. May 8. Available: <a href="http://acktrust.lib">http://acktrust.lib</a>	Centralized Waste Treaters	17	No	No	CWT00411

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5.0	EPA-HQ-OW-2015-0665-0856	Organic and inorganic composition and microbiology of produced waters from Pennsylvania shale gas wells. DCN CWT00412	"The presence of culturable bacteria was not associated with salinity or location; although organic compound concentrations and time in production were correlated with microbial activity. Interestingly, we found that unlike the inorganic chemistry, PW org	Publication; Copyrighted Material	Akob, D.M., I.M. Cozzarelli, D.S. Dunlap,	01/01/2015	Akob, D.M., I.M. Cozzarelli, D.S. Dunlap, E.L. Rowan, and M.M. Lorah. 2015. Organic and inorganic composition and microbiology of produced waters from Pennsylvania shale gas wells. Applied	Centralized Waste Treaters	10	No	Yes	CWT00412
5.0	EPA-HQ-OW-2015-0665-0849	Treatment of shale gas produced water for discharge. Presentation at the NETL/DOE Technical Workshops for the Hydraulic Fracturing Study DCN CWT00413	Document is a presentation of produced water management strategies, goals, challenges, and other considerations.	Meeting or Teleconference Materials	Alleman, D	03/01/2011	Alleman, D. 2011. Treatment of shale gas produced water for discharge. Presentation at the NETL/DOE Technical Workshops for the Hydraulic Fracturing Study. March 2011. Available electronically at:	Centralized Waste Treaters	26	No	No	CWT00413
5.0	EPA-HQ-OW-2015-0665-0850	Australian and New Zealand Guidelines for Fresh and Marine Water Quality DCN CWT00414	"The Australian and New Zealand Guidelines for Fresh and Marine Water Quality (the Guidelines) have been prepared as part of Australia's National Water Quality Management Strategy (NWQMS) and relate to New Zealand's National Agenda for Sustainable Water	Guidance, Interpretation, Policy, Procedure	Anzecc, A	10/01/2000	Anzecc, A. 2000. Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australia n and New Zealand Environment and Conservation Council and	Centralized Waste Treaters	3	No	No	CWT00414

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5.0	EPA-HQ-OW-2015-0665-0851	A Comprehensive Ichthyofaunal Survey of Tenmile Creek Watershed: Phase II. Final Report for Grant Agreement WRCP-07283 DCN CWT00415	"This project is a continuation of the survey of Tenmile Creek drainage initiated as "A Comprehensive Ichthyofaunal Survey of the Tenmile Creek Watershed" (Phase I - Grant Agreement WRCP-06169), extending upstream from Station 15 – approximately 16 km to	Report	Argent, D.G. and W.G. Kimmel	01/01/2009	Argent, D.G. and W.G. Kimmel. 2009. A Comprehensive Ichthyofaunal Survey of Tenmile Creek Watershed: Phase II. Final Report for Grant Agreement WRCP-07283. California University of PA	Centralized Waste Treaters	18	No	No	CWT00415
5.0	EPA-HQ-OW-2015-0665-0852	Water Quality for Irrigated Agriculture – Salinity/Sodicity Focus DCN CWT00416	Document is a presentation on salinity and sodicity in water for agricultural irrigation. The presentation includes descriptions of irrigation water quality management and yield impacts of degraded water quality.	Report	Bauder, T., J. Stednick, T. Gates, and L.		Bauder, T., J. Stednick, T. Gates, and L. Sutherland. Undated. Water Quality for Irrigated Agriculture – Salinity/Sodicity Focus. Colorado State University and the Natural Resources Conservation	Centralized Waste Treaters	47	No	No	CWT00416
5.0	EPA-HQ-OW-2015-0665-0853	Hydraulic Fracturing Radiological Concerns for Ohio. Fact Sheet prepared for FreshWater Accountability Project Ohio DCN CWT00417	"In this fact sheet, we want to cut through this murky haze that is settling over Ohio. We will explore the situation at the Patriot water treatment plant in Warren, OH, solid waste disposal in landfills, the potential impact of fracking near public drink	Fact/Data Sheet	Belcher, M. and M. Resnikoff	06/13/2013	Belcher, M. and M. Resnikoff. 2013. Hydraulic Fracturing Radiological Concerns for Ohio. Fact Sheet prepared for FreshWater Accountability Project Ohio. Radioactive Waste Management	Centralized Waste Treaters	37	No	No	CWT00417

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5.0	EPA-HQ-OW-2015-0665-0854	Marcellus Shale Post-Frac Flowback Waters – Where Is All the Salt Coming from and What Are the Implications? Paper SPE 125740 DCN CWT00418	"In this paper, we present both geochemical and lithologic laboratory and field data to address the salt question. Is salt being dissolved from the shale, or are deep saline aquifers being breached during hydraulic fracturing? What evidence do we have to	Publication; Copyrighted Material	Blauch, M.E., R.R. Myers, T.R. Moore, B.A.	09/23/2009	Blauch, M.E., R.R. Myers, T.R. Moore, B.A. Lipinski, and N.A. Houston. 2009. Marcellus Shale Post-Frac Flowback Waters – Where Is All the Salt Coming from and What Are the Implications? Paper SPE	Centralized Waste Treaters	20	No	Yes	CWT00418
5.0	EPA-HQ-OW-2015-0665-0855	Radionuclides in fracking wastewater: Managing a toxic blend DCN CWT00419	Document discusses issues surrounding the occurrence of radionuclides in fracking wastewater with a focus on produced water in the Marcellus Shale region of Pennsylvania.	Publication; Copyrighted Material	Brown, V.J	02/01/2014	Brown, V.J. 2014. Radionuclides in fracking wastewater: Managing a toxic blend. Environmental Health Perspectives 122:A50–A55. Available: <a href="http://doi.org/10.1289/ehp.122">http://doi.org/10.1289/ehp.122</a>	Centralized Waste Treaters	6	No	Yes	CWT00419
5.0	EPA-HQ-OW-2015-0665-0857	Taste quality of mineralized water DCN CWT00420	"The purpose of the present report is to present results from two taste panel studies in which panel members rated the general taste quality of natural water samples. The panel data, along with results from consumer surveys which will be reported separate	Publication; Copyrighted Material	Bruvold, W.H. and H.J. Ongerth	05/01/1969	Bruvold, W.H. and H.J. Ongerth, 1969. Taste quality of mineralized water. Journal of the American Water Works Association 61(4):170–174.	Centralized Waste Treaters	6	No	Yes	CWT00420

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5.0	EPA-HQ-OW-2015-0665-0858	Organic pollutants in shale gas flowback and produced waters: Identification, potential ecological impact, and implications for treatment strategies DCN CWT00421	"This review addresses identification of individual organic contaminants in FPW, and stresses the gaps in the knowledge on FPW composition that exist so far. Furthermore, the risk quotient approach was applied to predict the toxicity of the quantified org	Publication; Copyrighted Material	Butkovskiy, A., H. Bruning, S.A.E. Kools,	04/05/2017	Butkovskiy, A., H. Bruning, S.A.E. Kools, H.H.M. Rijnaarts, and A.P. Van Wezel. 2017. Organic pollutants in shale gas flowback and produced waters: Identification, potential	Centralized Waste Treaters	15	No	Yes	CWT00421
5.0	EPA-HQ-OW-2015-0665-0859	Salinisation of rivers: An urgent ecological issue DCN CWT00422	"Secondary salinisation of rivers and streams is a global and growing threat that might be amplified by climate change. It can have many different causes, like irrigation, mining activity or the use of salts as de-icing agents for roads. Freshwater organi	Publication; Copyrighted Material	Cañedo-Argüelles, M., B.J. Kefford, C. Pis	10/10/2012	Cañedo-Argüelles, M., B.J. Kefford, C. Piscart, N. Prat, R.B. Schäfer, and C. Schulz. 2013. Salinisation of rivers: An urgent ecological issue. Environ. Pollut. 173:157–167.	Centralized Waste Treaters	11	No	Yes	CWT00422
5.0	EPA-HQ-OW-2015-0665-0860	Inhibition of anaerobic digestion process: A review DCN CWT00423	"This review provides a detailed summary of the research conducted on the inhibition of anaerobic processes. The inhibitors commonly present in anaerobic digesters include ammonia, sulfide, light metal ions, heavy metals, and organics. Due to the differen	Publication; Copyrighted Material	Chen, Y., J.J. Cheng, and K.S. Creamer	01/25/2007	Chen, Y., J.J. Cheng, and K.S. Creamer. 2008. Inhibition of anaerobic digestion process: A review. Bioresource Technology 99:4044–4064. Available: <a href="http://www.zjubiol.ch.zju.edu.cn/">http://www.zjubiol.ch.zju.edu.cn/</a>	Centralized Waste Treaters	21	No	Yes	CWT00423

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5.0	EPA-HQ-OW-2015-0665-0958	Temporal changes in microbial ecology and geochemistry in produced water from hydraulically fractured Marcellus shale gas wells DCN CWT00425	"This study tracked microbial community dynamics using pyrotag sequencing of 16S rRNA genes in water samples from three hydraulically fractured Marcellus shale wells in Pennsylvania, USA over a 328-day period. There was a reduction in microbial richness a	Publication; Copyrighted Material	Cluff, M.A., A. Hartsock, J.D. MacRae, K.	01/01/2014	Cluff, M.A., A. Hartsock, J.D. MacRae, K. Carter, and P.J. Mouser. 2014. Temporal changes in microbial ecology and geochemistry in produced water from hydraulically fractured	Centralized Waste Treaters	10	No	Yes	CWT00425
5.0	EPA-HQ-OW-2015-0665-0866	Natural gas operations from a public health perspective DCN CWT00426	"The discussion highlights the difficulty of developing effective water quality monitoring programs. To protect public health we recommend full disclosure of the contents of all products, extensive air and water monitoring, coordinated environmental/human	Publication; Copyrighted Material	Colborn, T., C. Kwiatkowski, K. Schultz, a	09/20/2011	Colborn, T., C. Kwiatkowski, K. Schultz, and M. Bachran. 2011. Natural gas operations from a public health perspective. Human and Ecological Risk Assessment 17:1039–1056.	Centralized Waste Treaters	19	No	Yes	CWT00426
5.0	EPA-HQ-OW-2015-0665-0867	Implementing Narrative Standards in Discharge Permits for the Protection of Irrigated Crops. Colorado Department of Public Health & Environment, Colorado Water Quality Control Division. Policy #WQP-24. March 8. DCN CWT00427	"The purpose of this policy is to provide additional guidance to the development of effluent limits, under two narrative standards, for permitting discharges to surface waters that subsequently are diverted to crop irrigation. The scope of this guidance i	Publication; Other Governmental	Colorado Department of Public Health & Env	03/08/2008	Colorado Department of Public Health & Environment. 2008. Implementing Narrative Standards in Discharge Permits for the Protection of Irrigated Crops. Colorado Department of	Centralized Waste Treaters	34	No	No	CWT00427

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5.0	EPA-HQ-OW-2015-0665-0868	Water Quality Permits – Policies & Procedures. Implementing Narrative Standards in Discharge Permits for the Protection of Irrigated Crops. Policy #: WQP-24 DCN CWT00428	"The purpose of this policy is to provide additional guidance to the development of effluent limits, under two narrative standards, for permitting discharges to surface waters that subsequently are diverted to crop irrigation. The scope of this guidance i	Guidance, Interpretation, Policy, Procedure	Colorado WQCD	03/08/2018	Colorado WQCD. 2008. Water Quality Permits – Policies & Procedures. Implementing Narrative Standards in Discharge Permits for the Protection of Irrigated Crops. Policy #.	Centralized Waste Treaters	34	No	No	CWT00428
5.0	EPA-HQ-OW-2015-0665-0869	A Review of the Rationale for EC and SAR Standards. WQPBWQSTR-002 DCN CWT00429	"On April 15, 2010, the Board of Environmental Review (Board) gave notice of its intent to review Montana's water quality standards through the triennial review process, as required by the federal Clean Water Act, 33 U.S.C. § 1313 (c). Included in this re	Publication; Other Governmental	Compton, A	08/05/2011	Compton, A. 2011. A Review of the Rationale for EC and SAR Standards. WQPBWQSTR-002. Montana Department of Environmental Quality, Water Quality Planning Bureau, Helena. August 5. Available	Centralized Waste Treaters	44	No	No	CWT00429
5.0	EPA-HQ-OW-2015-0665-0870	A fresh look at road salt: Aquatic toxicity and water-quality impacts on local, regional, and national scales DCN CWT00430	"A new perspective on the severity of aquatic toxicity impact of road salt was gained by a focused research effort directed at winter runoff periods. Dramatic impacts were observed on local, regional, and national scales. Locally, samples from 7 of 13 Mil	Publication; Copyrighted Material	Corsi, S.R., D.J. Graczyk, S.W. Geis, N.L.	07/22/2010	Corsi, S.R., D.J. Graczyk, S.W. Geis, N.L. Booth, and K.D. Richards. 2010. A fresh look at road salt: Aquatic toxicity and water-quality impacts on local, regional, and national scales. Environmental	Centralized Waste Treaters	7	No	Yes	CWT00430

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
5.0	EPA-HQ-OW-2015-0665-0871	Biological Treatment of High Salinity Wastewater Using Yeast and Bacterial Systems DCN CWT00431	"This study aimed to compare the performance of aerobic treatment using wild mixed yeast and bacterial culture for high salinity wastewater. The operating conditions of yeast treatment under high salinity such as pH, sludge retention time (SRT) and dissol	Study	Dan, N.P	12/01/2001	Dan, N.P. 2001. Biological Treatment of High Salinity Wastewater Using Yeast and Bacterial Systems. PhD Thesis, Asian Institute of Technology, Bangkok, Thailand. Available	Centralized Waste Treaters	170	No	No	CWT00431
5.0	EPA-HQ-OW-2015-0665-0872	Influence of high NaCl and NH4Cl salt levels on methanogenic associations DCN CWT00432	"The effect of high levels of NaCl and NH4Cl on the activity and attachment of methanogenic associations in semi-continuous flow-through reactor systems has been evaluated. Two well-functioning reactors received shock concentrations of NaCl and NH4Cl whil	Publication; Copyrighted Material	de Baere, L.A., M. Devocht, P. Van Assche,	01/01/1984	de Baere, L.A., M. Devocht, P. Van Assche, and W. Verstraete. 1984. Influence of high NaCl and NH4Cl salt levels on methanogenic associations. Water Research 18(5):543-548.	Centralized Waste Treaters	6	No	Yes	CWT00432
5.0	EPA-HQ-OW-2015-0665-0873	A comparison of zooplankton communities in saline lakewater with variable anion composition DCN CWT00433	"In this study, zooplankton species were related to environmental variables from 12 lakes: three saline lakes with water where the dominant anions were SO4 and CO3, four saline lakes with Cl-dominated water, and five dilute, subsaline (0.5-3 gl-1 total di	Publication; Copyrighted Material	Derry, A.M., E.E. Prepas, and P.D.N. Heber	05/23/2003	Derry, A.M., E.E. Prepas, and P.D.N. Hebert, 2003. A comparison of zooplankton communities in saline lakewater with variable anion composition. Hydrobiologia 505:199-215.	Centralized Waste Treaters	17	No	Yes	CWT00433



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5.0	EPA-HQ-OW-2015-0665-0874	Chemistry and Origin of Oil and Gas Well Brines in Western Pennsylvania. Open-File Report OFOG 10-01 DCN CWT00434	"Brines having moderate to high salt content (up to 343 grams per liter [g/L]) occupy most pore spaces in rocks below a depth of a few thousand feet in Pennsylvania and are brought to the surface during oil and gas operations. Forty analyses of brines fro	Publication; Other Governmental	Dresel, P.E. and A.W. Rose	01/01/2010	Dresel, P.E. and A.W. Rose. 2010. Chemistry and Origin of Oil and Gas Well Brines in Western Pennsylvania. Open-File Report OFOG 10-01. Pennsylvania Geol. Surv., 4th ser	Centralized Waste Treaters	56	No	No	CWT00434
5.0	EPA-HQ-OW-2015-0665-0875	Contribution of brominated organic disinfection by-products to the mutagenicity of drinking water DCN CWT00435	"The activity inducing chromosomal aberrations of the mixture of brominated disinfection by-products (DBPs) was approximately three times higher than that of the chlorinated counterparts for the same hypohalous acid dose. With the combination of chromosom	Publication; Copyrighted Material	Echigo, S., S. Itoh, T. Natsui, T. Araki,	01/01/2004	Echigo, S., S. Itoh, T. Natsui, T. Araki, and R. Ando. 2004. Contribution of brominated organic disinfection by-products to the mutagenicity of drinking water. Water Science Technology 50(5):221-228	Centralized Waste Treaters	8	No	Yes	CWT00435
5.0	EPA-HQ-OW-2015-0665-0876	A systematic evaluation of chemicals in hydraulic-fracturing fluids and wastewater for reproductive and developmental toxicity DCN CWT00436	"We systematically evaluated 1021 chemicals identified in hydraulic-fracturing fluids (n=925), wastewater (n=132), or both (n=36) for potential reproductive and developmental toxicity to triage those with potential for human health impact. We searched the	Publication; Copyrighted Material	Elliott, E.G., A.S. Ettinger, B.P. Leaderer	09/25/2015	Elliott, E.G., A.S. Ettinger, B.P. Leaderer, M.B. Bracken, and N.C. Deziel. 2017. A systematic evaluation of chemicals in hydraulic-fracturing fluids and wastewater for reproductive and	Centralized Waste Treaters	10	No	Yes	CWT00436

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5.0	EPA-HQ-OW-2015-0665-0877	Stream vulnerability to widespread and emergent stressors: A focus on unconventional oil and gas DCN CWT00437	"We developed indices to describe the watershed sensitivity and exposure to natural and anthropogenic disturbances and computed a vulnerability index from these two scores across stream catchments in six productive shale plays. We predicted that catchment	Publication; Copyrighted Material	Entrekin, S.A., K.O. Maloney, K.E. Kapo, A	09/23/2015	Entrekin, S.A., K.O. Maloney, K.E. Kapo, A.W. Walters, M.A. Evans-White, and K.M. Klemow. 2015. Stream vulnerability to widespread and emergent stressors: A focus on unconventional	Centralized Waste Treaters	28	No	Yes	CWT00437
5.0	EPA-HQ-OW-2015-0665-0959	Effects of Total Dissolved Solids (TDS) on Fertilization and Viability of Rainbow Trout and Chum Salmon Embryos. Revised Final Draft. EVS Project No. 9/302-28. DCN CWT00440	Effects of Total Dissolved Solids (TDS) on Fertilization and Viability of Rainbow Trout and Chum Salmon Embryos	Study	EVS Environment Consultants	01/01/1998	EVS Environment Consultants. 1998. Effects of Total Dissolved Solids (TDS) on Fertilization and Viability of Rainbow Trout and Chum Salmon Embryos. Revised Final Draft. EVS	Centralized Waste Treaters	1	No	No	CWT00440
5.0	EPA-HQ-OW-2015-0665-0879	WVDEP Permit Determination Form; Permit R13-2794. DCN CWT00441	Permit document from the West Virginia Department of Environmental Protection for Fairmont Brine Processing, LLC	Permit, Registration	Joe Kessler	08/24/2016	FBP. 2016. WVDEP Permit Determination Form; Permit R13-2794. Fairmont Brine Processing LLC, Fairmont, WV. Available electronically at: <a href="https://dep.wv.gov/daq/Documents/August%202016%20Permits%20">https://dep.wv.gov/daq/Documents/August%202016%20Permits%20</a>	Centralized Waste Treaters	20	No	No	CWT00441

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5.0	EPA-HQ-OW-2015-0665-0880	Sodium inhibition in the anaerobic digestion process: Antagonism and adaptation phenomena DCN CWT00442	"The effect of sodium on the methanization of volatile fatty acid (VFA) mixtures was evaluated for three different sludges. Sodium concentrations causing 50% inhibition ranged from 3 to 16 g l <sup>-1</sup> in the absence of nutrients or other salts, showing a higher	Publication; Copyrighted Material	Feijoo, G., M. Soto, R. Méndez, and J.M. L	01/01/1995	Feijoo, G., M. Soto, R. Méndez, and J.M. Lema. 1995. Sodium inhibition in the anaerobic digestion process: Antagonism and adaptation phenomena. Enzyme and Microbial	Centralized Waste Treaters	9	No	Yes	CWT00442
5.0	EPA-HQ-OW-2015-0665-0881	Assessment of effluent contaminants from three facilities discharging Marcellus shale wastewater to surface waters in Pennsylvania DCN CWT00443	"Unconventional natural gas development in Pennsylvania has created a new wastewater stream. In an effort to stop the discharge of Marcellus Shale unconventional natural gas development wastewaters into surface waters, on May 19, 2011 the Pennsylvania Dep	Publication; Copyrighted Material	Ferrar, K.J., D.R. Michanowicz, C.L. Chris	05/04/2013	Ferrar, K.J., D.R. Michanowicz, C.L. Christen, N. Mulcahy, S.L. Malone, and R.K. Sharma. 2013. Assessment of effluent contaminants from three facilities discharging	Centralized Waste Treaters	10	No	Yes	CWT00443
5.0	EPA-HQ-OW-2015-0665-0882	Influence of oil and gas field operations on spatial and temporal distributions of atmospheric non-methane hydrocarbons and their effect on ozone formation in winter DCN CWT00444	"Emissions from oil and natural gas development during winter in the Upper Green River basin of Wyoming are known to drive episodic ozone (O3) production. Contrasting O3 distributions were observed in the winters of 2011 and 2012, with numerous episodes (	Publication; Copyrighted Material	Field, R.A., J. Soltis, M.C. McCarthy, S.	03/31/2015	Field, R.A., J. Soltis, M.C. McCarthy, S. Murphy, and D.C. Montague. 2015. Influence of oil and gas field operations on spatial and temporal distributions of atmospheric non-methane hydrocarbons	Centralized Waste Treaters	16	No	Yes	CWT00444

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5.0	EPA-HQ-OW-2015-0665-0883	Fracked ecology: Response of aquatic trophic structure and mercury biomagnification dynamics in the Marcellus Shale formation DCN CWT00445	"Twenty-seven remotely-located streams in Pennsylvania's Marcellus Shale basin were sampled during June and July of 2012 and 2013. At each stream, stream physiochemical properties, trophic biodiversity, and structure and mercury levels were assessed. We u	Publication; Copyrighted Material	Grant, C.J., A.K. Lutz, A.D. Kulig, and M.	10/14/2016	Grant, C.J., A.K. Lutz, A.D. Kulig, and M.R. Stanton. 2016. Fracked ecology: Response of aquatic trophic structure and mercury biomagnification dynamics in the Marcellus Shale formation	Centralized Waste Treaters	12	No	Yes	CWT00445
5.0	EPA-HQ-OW-2015-0665-0884	Detailed Study of Irrigation Drainage in and near Wildlife Management Areas, West-Central Nevada, 1987-90. Part B. Effect on Biota in Stillwater and Fernley Wildlife Management Areas and other Nearby Wetlands DCN CWT00446	A water-quality reconnaissance study during 1986-87 found high concentrations of several potentially toxic elements in water, bottom sediment, and biota in and near Stillwater Wildlife Management Area (WMA). This study prompted the U.S. Department of the	Publication; Other Governmental	Hallock, R.J. and L.L. Hallock (eds.)	01/01/1993	Hallock, R.J. and L.L. Hallock (eds.). 1993. Detailed Study of Irrigation Drainage in and near Wildlife Management Areas, West-Central Nevada, 1987-90. Part B. Effect on Biota in Stillwater and Fernley Wildlife	Centralized Waste Treaters	86	No	No	CWT00446
5.0	EPA-HQ-OW-2015-0665-0885	Lethal levels of sodium chloride and potassium chloride for an oligochaete, chironomid, and a caddisfly of Lake Michigan DCN CWT00448	"Three species of aquatic invertebrates, sampled at sites in Lake Michigan, were subjected in the laboratory to known sodium chloride and potassium chloride concentrations in aqueous solutions. Lethal levels for each organism were observed and recorded fo	Publication; Copyrighted Material	Hamilton, R.W., J.K. Butter, and R.G. Brun	01/01/1975	Hamilton, R.W., J.K. Butter, and R.G. Brunette. 1975. Lethal levels of sodium chloride and potassium chloride for an oligochaete, chironomid, and a caddisfly of Lake Michigan. Environmental Entomology	Centralized Waste Treaters	4	No	Yes	CWT00448

RECORD SECTION	EPA DOCUMENT ID	TITLE	ABSTRACT	DOCUMENT TYPE	AUTHOR	AUTHOR DATE	SOURCE CITATION	CATEGORY INDUSTRY	PAGE	CBI	COPY - RIGHTED	DCN
5.0	EPA-HQ-OW-2015-0665-0886	Transport, Storage, and Disposal of Fracking Waste. Research Report 2014-R-0016 DCN CWT00449	"The transportation, storage, and disposal of hydraulic fracturing ("fracking") waste are regulated under a variety of federal and state laws. Contaminated water, which is fracking's largest waste product, is typically (1) treated to remove contaminants a	Report	Hansen, L.R	01/14/2014	Hansen, L.R. 2014. Transport, Storage, and Disposal of Fracking Waste. Research Report 2014-R-0016. Connecticut General Assembly, Office of Legislative Research, Hartford, CT	Centralized Waste Treaters	14	No	No	CWT00449
5.0	EPA-HQ-OW-2015-0665-0887	Discharges of produced waters from oil and gas extraction via wastewater treatment plants are sources of disinfection by-products to receiving streams DCN CWT00451	"To determine if wastewater treatment plants that accept produced waters discharge greater amounts of brominated DBPs, water samples were collected in Pennsylvania from four sites along a large river including an upstream site, a site below a publicly own	Publication; Copyrighted Material	Hladik, M.L., M.J. Focazio, and M. Engle	08/29/2013	Hladik, M.L., M.J. Focazio, and M. Engle. 2014. Discharges of produced waters from oil and gas extraction via wastewater treatment plants are sources of disinfection by-products to receiving	Centralized Waste Treaters	9	No	Yes	CWT00451
5.0	EPA-HQ-OW-2015-0665-0888	Bicarbonate as a potential confounding factor in cladoceran toxicity assessments of pore water from contaminated sediments DCN CWT00452	"Elevated alkalinity values measured in sediment pore water samples from the Grand Calumet River–Indiana Harbor Canal, an International joint Commission Area of Concern (AOC), caused concern over the potential effects of alkalinity on cladoceran test resp	Publication; Copyrighted Material	Hoke, R.A., W.R. Gala, J.B. Drake, J.P. Ge	02/26/1992	Hoke, R.A., W.R. Gala, J.B. Drake, J.P. Geisy, and S. Fleger. 1992. Bicarbonate as a potential confounding factor in cladoceran toxicity assessments of pore water from contaminated	Centralized Waste Treaters	8	No	Yes	CWT00452

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5.0	EPA-HQ-OW-2015-0665-0889	Elevated major ion concentrations inhibit larval mayfly growth and development DCN CWT00453	"Anthropogenic disturbances, including those from developing energy resources, can alter stream chemistry significantly by elevating total dissolved solids. Field studies have indicated that mayflies (Order Ephemeroptera) are particularly sensitive to hig	Publication; Copyrighted Material	Johnson, B.R., P.C. Weaver, C.T. Nietch, J	10/08/2014	Johnson, B.R., P.C. Weaver, C.T. Nietch, J.M. Lazorchak, K.A. Struewing, and D.H. Funk. 2014. Elevated major ion concentrations inhibit larval mayfly growth and development. Environmental	Centralized Waste Treaters	6	No	Yes	CWT00453
5.0	EPA-HQ-OW-2015-0665-0911	Effect of salt concentration on biological treatment of saline wastewater by fed-batch operation DCN CWT00454	"The performance of biological treatment processes for saline wastewater is usually low due to adverse effects of salt on microbial flora. High salt concentrations in wastewater cause plasmolysis and loss of cell activity, thereby resulting in low (COD) r	Publication; Copyrighted Material	Kargi, F. and A.R. Dincer	01/01/1996	1996. Effect of salt concentration on biological treatment of saline wastewater by fed-batch OP. Enzyme & Microbial Tech 19(7):529-537.	Centralized Waste Treaters	9	No	Yes	CWT00454
5.0	EPA-HQ-OW-2015-0665-0912	Saline wastewater treatment by halophile-supplemented activated sludge culture in an aerated rotating biodisc contactor DCN CWT00455	"Synthetic wastewater containing 0-10% salt (NaCl) was treated in a rotating biodisc unit operating in continuous mode. Salt tolerant, Halobacter halobium-supplemented activated sludge culture was used in order to alleviate salt inactivation effects. Effe	Publication; Copyrighted Material	Kargi, F. and A.R. Dincer	09/23/1997	1998. Saline wastewater treatment halophile-supple activated sludge culture aerated rotating biodisc contactor Enzyme and Microbial Tech 22:427-433.	Centralized Waste Treaters	7	No	Yes	CWT00455

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5.0	EPA-HQ-OW-2015-0665-0913	Increased salinization of fresh water in the northeastern United States DCN CWT00456	"We observed chloride concentrations of up to 25% of the concentration of seawater in streams of Maryland, New York, and New Hampshire during winters, and chloride concentrations remaining up to 100 times greater than unimpacted forest streams during summ	Publication; Copyrighted Material	Kaushal, S.S., P.M. Groffman, G.E. Likens,	09/20/2005	2005. Increased salinization of fresh water in the northeastern US Proc. Natl. Acad. Sci. U.S.A. 102(38):13517-13520.	Centralized Waste Treaters	4	No	Yes	CWT00456
5.0	EPA-HQ-OW-2015-0665-0914	High calcium concentration in water increases mortality of salmon and trout eggs DCN CWT00457	"Several experiments were conducted to investigate the effect of water chemistry during water hardening on survival of eggs of Atlantic salmon ( <i>Salmo salar</i> ), rainbow trout ( <i>Salmo gairdneri</i> ), and brook trout ( <i>Salvelinus fontinalis</i> ). Results of these exper	Publication; Copyrighted Material	Ketola, H.G., D. Longacre, A. Greulich, L.	01/01/1988	1988. High calcium concentration in water increases mortality of salmon and trout eggs. Progressive Fish-Culturist 50(3):129-135.	Centralized Waste Treaters	7	No	Yes	CWT00457
5.0	EPA-HQ-OW-2015-0665-0915	Toxicity of metals to a tubificid worm, <i>Tubifex tubifex</i> (Muller) DCN CWT00458	"Tubificid worms are useful indicators of varying degrees of aquatic pollution (Auston 1973). It is suggested that tubificid worms are an important element in the aquatic environment and therefore their use as a bioassay organism is logical one. The impor	Publication; Copyrighted Material	Khengarot, B.S	01/01/1991	1991 Journal of the Bulletin of Environmental Contamination and Toxicology 46:906-912.	Centralized Waste Treaters	7	No	Yes	CWT00458

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
5.0	EPA-HQ-OW-2015-0665-0916	Stream fish community responses to a gradient of specific conductance DCN CWT00459	"We assessed the impacts of a specific conductance gradient attributable to treated coal-mining discharges on the fish communities of a southwestern Pennsylvania stream. Total dissolved solids concentrations were determined from specific conductance value	Publication; Copyrighted Material	Kimmel, W. and D. Argent	05/12/2009	Kimmel, W. and D. Argent. 2010. Stream fish community responses to a gradient of specific conductance. Water Air Soil Pollution 206:49.	Centralized Waste Treaters	8	No	Yes	CWT00459
5.0	EPA-HQ-OW-2015-0665-0917	Survival to hatching of fishes in sulfate-saline waters, Devils Lake, North Dakota DCN CWT00460	"Laboratory-based bioassays were conducted to determine concentrations of sodium-sulfate type salinities that limit the hatching success of several fish species. Survival to hatching (SH) was significantly lower (P < 0.05) in sodium-sulfate type waters fr	Publication; Copyrighted Material	Koel, T.M. and J.J. Peterka	01/01/1995	1995. Survival to hatching of fishes in sulfate-saline waters, Devils Lake, North Dakota. Canadian Journal Fisheries and Aquatic Sciences 52:464-469.	Centralized Waste Treaters	6	No	Yes	CWT00460
5.0	EPA-HQ-OW-2015-0665-0918	The impact of commercially treated oil and gas produced water discharges on bromide concentrations & modeled brominated trihalomethane disinfection byproducts at two downstream municipal drinking water plants in the upper Allegheny River, PA DCN CWT00461	"This study focused on quantifying the contribution of Br- from a commercial wastewater treatment facility (CWTF) that solely treats wastes from oil and gas producers and discharges into the upper reaches of the Allegheny River, and impacts on two downstr	Publication; Copyrighted Material	Landis, M.S., A.S. Kamal, K.D. Kovalcik, C	11/03/2015	2016. Science of the Total Environment 542:505-520.	Centralized Waste Treaters	16	No	Yes	CWT00461



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
5.0	EPA-HQ-OW-2015-0665-0919	Brine spills associated with unconventional oil development in North Dakota DCN CWT00462	"Here, we characterize the major and trace element chemistry and isotopic ratios ( $^{87}\text{Sr}/^{86}\text{Sr}$ , $\delta^{18}\text{O}$ , $\delta^2\text{H}$ ) of surface waters ( $n = 29$ ) in areas impacted by oil and gas wastewater spills in the Bakken region of North Dakota. We establish geochemical and isotop	Publication; Copyrighted Material	Lauer, N.E., J.S. Harkness, and A. Vengosh	04/27/2016	2016. Brine spills associated with unconventional oil development in North Dakota. Environ. Sci. Technol. 50(10):5389–4397.	Centralized Waste Treaters	9	No	Yes	CWT00462
5.0	EPA-HQ-OW-2015-0665-0920	Treatment of organic pollution in industrial saline wastewater: A literature review DCN CWT00463	"Many industrial sectors are likely to generate highly saline wastewater: these include the agro-food, petroleum and leather industries. The discharge of such wastewater containing at the same time high salinity and high organic content without prior trea	Publication; Copyrighted Material	Lefebvre, O. and R. Moletta	01/01/2006	Lefebvre, O. and R. Moletta. 2006. Treatment of organic pollution in industrial saline wastewater: A literature review. Water Research 40(2):3671–3682	Centralized Waste Treaters	12	No	Yes	CWT00463
5.0	EPA-HQ-OW-2015-0665-0921	Shipping Radioactive Waste a Hot Issue in Drilling Sector DCN CWT00464	Document is a periodical article discussing the transportation of radioactive wastes resulting from drilling operations.	Publication; Copyrighted Material	Litvak, A	04/04/2016	Litvak, A. 2016. Shipping Radioactive Waste a Hot Issue in Drilling Sector. April 4. Pittsburgh Post-Gazette. Available: <a href="http://powersource.post-gazette.com/powersource/policy-powersource/201">http://powersource.post-gazette.com/powersource/policy-powersource/201</a>	Centralized Waste Treaters	6	No	Yes	CWT00464

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5.0	EPA-HQ-OW-2015-0665-0922	Unconventional oil and gas spills: Materials, volumes, and risks to surface waters in four states of the U.S. DCN CWT00465	"We analyzed spill data associated with unconventional wells from Colorado, New Mexico, North Dakota and Pennsylvania from 2005 to 2014, where we defined unconventional wells as horizontally drilled into an unconventional formation. We identified material	Publication; Copyrighted Material	Maloney, K.O., S. Baruch-Mordo, L.A. Patte	12/30/2016	2017. UOG spills: Materials, volumes, and risks to surface waters in four states of the U.S. Science of the Total Environment 581-582:369-377.	Centralized Waste Treaters	9	No	Yes	CWT00465
5.0	EPA-HQ-OW-2015-0665-1058	Occurrence and consequences of increased bromide in drinking water sources DCN CWT00466	"Elevated concentrations of brominated disinfection by-products (DBPs) have been reported recently by some drinking water utilities. Some of these occurrences have been correlated with upstream discharges of bromide-containing wastes from coal-fired power	Publication; Copyrighted Material	McTigue, N.E., D.A. Cornwell, K. Graf, and	11/01/2014	2014. Occurrence and consequences of increased bromide in drinking water sources. Journal American Water Works Association 106(11):E492-E508.	Centralized Waste Treaters	17	No	Yes	CWT00466
5.0	EPA-HQ-OW-2015-0665-0923	Salinity/toxicity relationship to predict the acute toxicity of produced waters to freshwater organisms DCN CWT00467	"As part of previous research, the Gas Research Institute, ENSR, and the University of Wyoming developed a series of multivariate logistic regression equations (called Salinity/Toxicity Relationships or STRS) that predict acute toxicity to three freshwater	Publication; Copyrighted Material	Mount, D.R., D.D. Gulley, and J.M. Evans	01/01/1993	1993. Salinity/toxicity relationship predict acute toxicity Proceedings, 1st Society of Petro Eng/USEPA Env Conf, San Antonio, TX. pp. 605-614.	Centralized Waste Treaters	10	No	Yes	CWT00467

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
5.0	EPA-HQ-OW-2015-0665-0924	Statistical models to predict the toxicity of major ions to Ceriodaphnia dubia, Daphnia magna and Pimephales promelas (fathead minnows) DCN CWT00468	"To provide a predictive tool to assess toxicity attributable to major ions, we tested the toxicity of over 2,900 ion solutions using the daphnids, Ceriodaphnia dubia and Daphnia magna, and fathead minnows (Pimephales promelas). Multiple logistic regressi	Publication; Copyrighted Material	Mount, D.R., D.D. Gulley, J.R. Hockett, T.	02/20/1997	1997 Stat models predict toxicity major ions Ceriodaphnia dubia Daphnia magna - Env Toxicology and Chemistry 16(10):2009-2019.	Centralized Waste Treaters	11	No	Yes	CWT00468
10.31	EPA-HQ-OW-2015-0665-0752	CBI_Final Site Visit Report for Carlisle Interconnect Technologies - DCN MF00111CBI	CBI_Final Site visit report prepared by ERG from the site visit at Carlisle Interconnect Technologies on May 16, 2016. Draft Incorporates facility and EPA comments.	Report	U.S. EPA	06/05/2017	U.S. EPA. 2017. CBI Final Site Visit Report for Carlisle Interconnect Technologies.	Metal Finishing, Part 433	17	Yes	No	MF00111
10.31	EPA-HQ-OW-2015-0665-0753	CBI_Memorandum to Ahmar Siddiqui, EPA; Subject: Notes from the Meeting with SRG Global Inc. on June 15, 2016 - DCN MF00112CBI	CBI_Final Notes for Meeting with SRG Global Inc. on June 15, 2016.	Memorandum	U.S. EPA	10/06/2016	ERG, 2016. CBI Memorandum to Ahmar Siddiqui, EPA. Subject: Notes from the Meeting with SRG Global Inc. on June 15, 2016.	Metal Finishing, Part 433	6	Yes	No	MF00112

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0754	CBI_Final Metal Finishing Site Visit Report for PB Fasteners - DCN MF00113CBI	CBI_Final Site visit report prepared by ERG from the site visit at PB Fasteners on May 17, 2016. Draft incorporates facility and EPA comments.	Report	U.S. EPA	03/07/2017	U.S. EPA. 2017. CBI Final Metal Finishing Site Visit Report for PB Fasteners.	Metal Finishing, Part 433	9	Yes	No	MF00113
10.31	EPA-HQ-OW-2015-0665-0755	Final Metal Finishing Site Visit Report for Northrop Grumman - DCN MF00114	Final Site Visit Report prepared by ERG from the site visit at Northrop Grumman on May 19, 2016.	Report	U.S. EPA	06/05/2017	U.S. EPA. 2017. Final Metal Finishing Site Visit Report for Northrop Grumman.	Metal Finishing, Part 433	6	No	No	MF00114
10.31	EPA-HQ-OW-2015-0665-0756	Quality Assurance Activities for the Collection of Existing Data to Support the Metal Finishing Preliminary Study - Revision 1 - DCN MF00115	Memorandum describes quality assurance procedures ERG will use for the selection of metal finishing sites and existing data collection during site visits under the Metal Finishing Preliminary Study.	Memorandum	Dan-Tam Nguyen, ERG	01/19/2016	ERG. 2016. Memorandum to U.S. EPA from ERG. Re: QA Activities for the Collection of Existing Data to Support the Metal Finishing Preliminary Study	Metal Finishing, Part 433	10	No	No	MF00115

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0757	Approach for the Review of the Metal Products and Machinery (MP&M) Rulemaking Documentation - DCN MF00116	Memorandum summarizing EPA's objectives, data sources, documentation, and QA/QC steps for review of the Metal Products and Machinery (MP&M) Rulemaking.	Memorandum	Ryan Novak, ERG	02/22/2016	ERG. 2016. Memorandum to U.S. EPA, from ERG. Re: Approach for the Review of MP&M Rulemaking Documentation	Metal Finishing, Part 433	9	No	No	MF00116
10.31	EPA-HQ-OW-2015-0665-0844	Metal Products and Machinery (MP&M) Rulemaking Documentation: Screening Review Results and Proposed Approach for Detailed Review - DCN MF00117	Memorandum describing the objectives, methodology, results, and potential next steps for the screening review of Metal Products and Machinery (MP&M) Rulemaking Documentation.	Memorandum	Ryan Novak, ERG	09/19/2016	ERG. 2016. Memorandum to U.S. EPA from ERG. Re: MP&M Rulemaking Documentation: Screening Review Results and Proposed Approach for Detailed Review.	Metal Finishing, Part 433	19	No	No	MF00117
10.31	EPA-HQ-OW-2015-0665-0844.1	MP&M Rulemaking Initial Screening Tracking Sheet - DCN MF00117A1	Memorandum attachment (spreadsheet) with brief descriptions, data sources, and ERG recommendations for data sources analyzed during the screening review.	Data	Ryan Novak, ERG	09/19/2016	ERG. 2016. Memorandum to U.S. EPA from ERG. Re: MP&M Documentation: Screening Review Results and Proposed Approach for Detailed Review - Att.	Metal Finishing, Part 433	0	No	No	MF00117A1

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0758	Metal Finishing Study: Plan for Identifying Pollution Prevention Practices in the Metal Finishing Industry - DCN MF00118	The memorandum presents ERG's plan for the P2 review including the data sources, objectives, review plan, and QA/QC steps	Memorandum	Anna Dimling, ERG	03/10/2017	ERG. 2017. Plan for Identifying Pollution Prevention Practices in the Metal Finishing Industry.	Metal Finishing, Part 433	9	No	No	MF00118
10.31	EPA-HQ-OW-2015-0665-1062	CBI_Final Metal Finishing Site Visit Report for Hill Air Force Base - DCN MF00119CBI	CBI_Final site visit report prepared by ERG from the site visit at Hill Air Force Base on July 11, 2016.	Report	U.S. EPA	08/24/2017	U.S. EPA. 2017. CBI Final Metal Finishing Site Visit Report for Hill Air Force Base.	Metal Finishing, Part 433	29	Yes	No	MF00119
10.31	EPA-HQ-OW-2015-0665-1062.1	CBI_IWCS Report for Building 505 - DCN MF00119.A1CBI	CBI_IWCS Report for Hill Air Force Base Building 505. Attachment to the Final Site Visit Report for the site visit at Hill Air Force Base.	Report	Hill Air Force Base	08/29/2016	HAFB. 2016. CBI IWCS Report for Building 505.	Metal Finishing, Part 433	49	Yes	No	MF00119A1

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1062.2	CBI_IWCS Report for Building 507 - DCN MF00119.A2CBI	CBI_IWCS Report for Hill Air Force Base Building 507. Attachment to the Final Site Visit Report for the site visit at Hill Air Force Base.	Report	Hill Air Force Base	08/29/2016	HAFB. 2016. CBI IWCS Report for Building 507.	Metal Finishing, Part 433	40	Yes	No	MF00119A2
10.31	EPA-HQ-OW-2015-0665-1062.3	CBI_Historical Monitoring Data - DCN MF00119.A3CBI	CBI_Historical Monitoring Data for Hill Air Force Base Industrial Waste Treatment Plant. Attachment to the Final Site Visit Report for the site visit at Hill Air Force Base.	Report	Hill Air Force Base	09/01/2016	HAFB. 2016. CBI Historical Monitoring Data.	Metal Finishing, Part 433	0	Yes	No	MF00119A3
10.31	EPA-HQ-OW-2015-0665-1062.4	CBI_Quantity and Quality of Industrial Waste Collection System Discharges for Hill Air Force Base - DCN MF00119.A4CBI	CBI_Report from a study to quantify industrial waste discharges to the Hill Air Force Base IWCS from select buildings on base. Report also presents water quality data. Attachment to the Final Site Visit Report for the site visit at Hill Air Force Base.	Report	Stantec	03/01/2017	Stantec. 2017. CBI IWCS Discharge Report.	Metal Finishing, Part 433	726	Yes	No	MF00119A4

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0759	CBI_Final Metal Finishing Site Visit Report for Williams International - DCN MF00120CBI	CBI_Final Site visit report prepared by ERG from the site visit at Williams International on July 12, 2016. Draft incorporates facility and EPA comments.	Report	U.S. EPA	07/31/2017	U.S. EPA. 2017. CBI Final Metal Finishing Site Visit Report for Williams International.	Metal Finishing, Part 433	8	Yes	No	MF00120
10.31	EPA-HQ-OW-2015-0665-0760	CBI_Final Metal Finishing Site Visit Report for Blanchard Metal Processing - DCN MF00121CBI	CBI_Final Site visit report prepared by ERG from the site visit at Blanchard Metal Processing on July 13, 2016. Draft incorporates facility and EPA comments.	Report	U.S. EPA	01/12/2017	U.S. EPA. 2017. CBI Final Metal Finishing Site Visit Report for Blanchard Metal Processing.	Metal Finishing, Part 433	12	Yes	No	MF00121
10.31	EPA-HQ-OW-2015-0665-0761	CBI_Final Metal Finishing Site Visit Report for Pilkington Metal Finishing LLC - DCN MF00122CBI	CBI_Final Site visit report prepared by ERG from the site visit at Pilkington Metal Finishing LLC on July 13, 2016. Draft incorporates facility and EPA comments.	Report	U.S. EPA	06/21/2017	U.S. EPA. 2017. CBI Final Metal Finishing Site Visit Report for Pilkington Metal Finishing LLC.	Metal Finishing, Part 433	28	Yes	No	MF00122



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0762	CBI_Final Metal Finishing Site Visit Report for O.C. Tanner Manufacturing Company - DCN MF00123CBI	CBI_Final Site visit report prepared by ERG from the site visit at O.C. Tanner Manufacturing Company on July 14, 2016. Draft incorporates facility and EPA comments.	Report	U.S. EPA	06/21/2017	U.S. EPA. 2017. CBI Final Metal Finishing Site Visit Report for O.C. Tanner Manufacturing Company.	Metal Finishing, Part 433	24	Yes	No	MF00123
10.31	EPA-HQ-OW-2015-0665-0763	Final Metal Finishing Site Visit Report for Varian Metal System X-Ray Products - DCN MF00124	Final Site visit report prepared by ERG from the site visit at Varian Metal System X-Ray Products on July 14, 2016. Draft incorporates facility and EPA comments.	Report	U.S. EPA	08/23/2017	U.S. EPA. 2017. Final Metal Finishing Site Visit Report for Varian Metal System X-Ray Products.	Metal Finishing, Part 433	13	No	No	MF00124
10.31	EPA-HQ-OW-2015-0665-0764	Toxic Release Inventory (TRI) Pollution Prevention (P2) Data Summary - DCN MF00125	The memorandum summarizes pollution prevention (P2) practices in 2011 through 2015 Toxic Release Inventory (TRI) P2 data.	Memorandum	Anna Dimling, ERG	03/29/2017	ERG. 2017. Memorandum to U.S. EPA from ERG. Re: TRI P2 Data Summary. (March 29).	Metal Finishing, Part 433	21	No	No	MF00125

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0765	Final Metal Finishing Site Visit Report for Plymouth Plating Works - DCN MF00126	Final Site visit report prepared by ERG from the site visit at Plymouth Plating Works on August 15, 2016.	Report	U.S. EPA	07/14/2017	U.S. EPA. 2017. Final Metal Finishing Site Visit Report for Plymouth Plating Works.	Metal Finishing, Part 433	27	No	No	MF00126
10.31	EPA-HQ-OW-2015-0665-0766	CBI_Final Metal Finishing Site Visit Report for KC Jones Plating Company - DCN MF00127CBI	CBI_Final Site visit report prepared by ERG from the site visit at KC Jones Plating Company on August 15, 2016.	Report	U.S. EPA	07/14/2017	U.S. EPA. 2017. CBI Final Metal Finishing Site Visit Report for KC Jones Plating Company.	Metal Finishing, Part 433	23	Yes	No	MF00127
10.31	EPA-HQ-OW-2015-0665-0767	CBI_Final Metal Finishing Site Visit Report for AJAX Metal Processing - DCN MF00128CBI	CBI_Final Site visit report prepared by ERG from the site visit at AJAX Metal Processing on August 16, 2016.	Report	U.S. EPA	07/14/2017	U.S. EPA. 2017. CBI Final Metal Finishing Site Visit Report for AJAX Metal Processing.	Metal Finishing, Part 433	15	Yes	No	MF00128

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0768	CBI_Final Metal Finishing Site Visit Report for Ford Flat Rock - DCN MF00129CBI	CBI_Final Site visit report prepared by ERG from the site visit at Ford Flat Rock on August 16, 2016.	Report	U.S. EPA	07/14/2017	U.S. EPA. 2017. CBI Final Metal Finishing Site Visit Report for Ford Flat Rock.	Metal Finishing, Part 433	12	Yes	No	MF00129
10.31	EPA-HQ-OW-2015-0665-0769	Final Metal Finishing Site Visit Report for Elm Plating - DCN MF00130	Final Site visit report prepared by ERG from the site visit at Elm Plating Company on August 17, 2016. Draft incorporates facility and EPA comments.	Report	U.S. EPA	07/14/2017	U.S. EPA. 2017. Final Metal Finishing Site Visit Report for Elm Plating.	Metal Finishing, Part 433	24	No	No	MF00130
10.31	EPA-HQ-OW-2015-0665-0770	Final Metal Finishing Site Visit Report for Trion Coatings - DCN MF00131	Final Site visit report prepared by ERG from the site visit at Trion Coatings on August 17, 2016. Draft incorporates facility and EPA comments.	Report	U.S. EPA	07/14/2017	U.S. EPA. 2017. Final Metal Finishing Site Visit Report for Trion Coatings.	Metal Finishing, Part 433	5	No	No	MF00131

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0771	Final Metal Finishing Site Visit Report for Methode Electronics, Inc. - DCN MF00132	CBI_Final Site visit report prepared by ERG from the site visit at Methode Electronics, Inc. on August 18, 2016. Draft incorporates facility and EPA comments.	Report	U.S. EPA	07/14/2017	U.S. EPA. 2017. Final Metal Finishing Site Visit Report for Methode Electronics, Inc.	Metal Finishing, Part 433	9	No	No	MF00132
10.31	EPA-HQ-OW-2015-0665-0772	Final Metal Finishing Site Visit Report for Eagle Electronics - DCN MF00133	Final Site visit report prepared by ERG from the site visit at Eagle Electronics on August 18, 2016. Draft incorporates facility and EPA comments.	Report	U.S. EPA	07/14/2017	U.S. EPA. 2017. Final Metal Finishing Site Visit Report for Eagle Electronics.	Metal Finishing, Part 433	17	No	No	MF00133
10.31	EPA-HQ-OW-2015-0665-0773	CBI_Final Metal Finishing Site Visit Report for Metal Impact LLC - DCN MF00134CBI	CBI_Final Site visit report prepared by ERG from the site visit at Metal Impact LLC on August 19, 2016. Draft incorporates facility and EPA comments.	Report	U.S. EPA	07/10/2017	U.S. EPA. 2017. CBI Final Metal Finishing Site Visit Report for Metal Impact LLC.	Metal Finishing, Part 433	16	Yes	No	MF00134

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0774	CBI_Final Metal Finishing Site Visit Report for Magnetic Inspection Laboratory Inc. - DCN MF00135CBI	CBI_Final Site Visit report prepared by ERG from the site visit at Magnetic Inspection Laboratory Inc. on August 19, 2016. Draft incorporates facility and EPA comments.	Report	U.S. EPA	07/10/2017	U.S. EPA. 2017. CBI Final Metal Finishing Site Visit Report for Magnetic Inspection Laboratory Inc.	Metal Finishing, Part 433	17	Yes	No	MF00135
10.31	EPA-HQ-OW-2015-0665-0775	Metal Finishing Preliminary Study: Proposed Approach for Phase I Review of DMR and TRI Data - DCN MF00136	Memorandum describing the approach for the Phase I DMR and TRI data review.	Memorandum	Anna Dimling, ERG	11/06/2015	ERG. 2015. Memorandum to U.S. EPA from ERG. Re: Metal Finishing Preliminary Study: Proposed Approach for Phase I Review of DMR and TRI Data.	Metal Finishing, Part 433	11	No	No	MF00136
10.31	EPA-HQ-OW-2015-0665-0845	Metal Finishing Preliminary Study: Phase I Results and Proposed Approach for Phase II Review of DMR and TRI Data - DCN MF00137	Memorandum describing the approach for the Phase II DMR and TRI data review and presenting the results from Phase I review.	Memorandum	Anna Dimling, ERG	01/15/2016	ERG. 2016. Metal Finishing Preliminary Study: Phase I Results and Proposed Approach for Phase II Review of DMR and TRI Data.	Metal Finishing, Part 433	13	No	No	MF00137

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0845.1	DMR and TRI Phase I Review Results Memo Attachment - DCN MF00137A1	Attachment to the Phase II Memo providing the results from the Phase I Review of the DMR and TRI data.	Memorandum	Anna Dimling, ERG	03/15/2016	ERG. 2016. Attachment to MF Preliminary Study: Phase I Results and Proposed Approach for Phase II Review of DMR and TRI Data.	Metal Finishing, Part 433	0	No	No	MF00137A1
10.31	EPA-HQ-OW-2015-0665-0846	Metal Finishing Preliminary Study: Summary of Phase I and Phase II Review of DMR and TRI Data - DCN MF00138	Memorandum summarizing the Phase I and Phase II Review of the DMR and TRI Data and presenting the results of the Phase II Review.	Memorandum	Anna Dimling, ERG	04/07/2017	ERG. 2017. Memorandum to U.S. EPA from Anna Dimling, ERG. Re: MF Preliminary Study: Summary of Phase I and Phase II Review of DMR and TRI Data.	Metal Finishing, Part 433	24	No	No	MF00138
10.31	EPA-HQ-OW-2015-0665-0846.1	DMR and TRI Phase II Review Results Memo Attachment - DCN MF00138A1	Attachment to DMR/TRI Summary Memo that provides the results from the Phase II Review of the DMR and TRI Data	Memorandum	Anna Dimling, ERG	04/07/2017	ERG. 2017. Attachment to MF Preliminary Study: Summary of Phase I and Phase II Review of DMR and TRI Data.	Metal Finishing, Part 433	0	No	No	MF00138A1

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0847	Federal-Mogul Corporation NPDES Permit - DCN MF00139	Wastewater discharge permit application for Federal-Mogul Corporation in Greenville, Michigan.	Permit, Registration	MI DEQ	12/31/2013	MI DEQ. 2013. Federal-Mogul Corporation NPDES Permit.	Metal Finishing, Part 433	7	No	No	MF00139
10.31	EPA-HQ-OW-2015-0665-0847.1	Federal-Mogul Corporation NPDES Permit Flow Confirmation - DCN MF00139A1	Email documentation for NPDES permit application for Federal-Mogul Corporation	Permit, Registration	MI DEQ	08/05/2015	MI DEQ. 2015. Federal-Mogul Corporation NPDES Permit Flow Confirmation.	Metal Finishing, Part 433	3	No	No	MF00139A1
10.31	EPA-HQ-OW-2015-0665-0847.2	Federal-Mogul Corporation NPDES Permit Process Flow Diagram - DCN MF00139A2	Attachment to wastewater treatment permit for Federal-Mogul Corporation with wastewater flow diagram.	Permit, Registration	Federal-Mogul	12/31/2013	MI DEQ. 2013. Federal-Mogul Corporation NPDES Permit Process Flow Diagram.	Metal Finishing, Part 433	3	No	No	MF00139A2

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0776	Facility Contact Telecon: Double Eagle Steel Coating Co. - DCN MF00140	Summary of telephone conversation with Steve Ford about Double Eagle Steel Coating Co. in Dearborn, MI.	Report	Anna Dimling, ERG	03/23/2016	ERG. 2016. Facility Contact Telecon: Double Eagle Steel Coating Co.	Metal Finishing, Part 433	2	No	No	MF00140
10.31	EPA-HQ-OW-2015-0665-0777	Facility Contact Telecon: Global Foundries East Fishkill Facility - DCN MF00141	Summary of telephone conversation with Gary Marone about East Fishkill Facility in Hopewell Junction, NY.	Report	Anna Dimling, ERG	03/24/2016	ERG. 2016. Facility Contact Telecon: Global Foundries East Fishkill Facility.	Metal Finishing, Part 433	3	No	No	MF00141
10.31	EPA-HQ-OW-2015-0665-0778	Facility Contact Telecon: Electro-Spec Inc. - DCN MF00142	Summary of telephone conversation with Ben McKnight about Electro-Spec Inc. facility in Franklin, IN.	Report	Anna Dimling, ERG	03/22/2016	ERG. 2016. Facility Contact Telecon: Electro-Spec Inc.	Metal Finishing, Part 433	1	No	No	MF00142



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0779	Facility Contact Telecon: George Industries - DCN MF00143	Summary of telephone conversation with Eric Herrera about George Industries in Los Angeles, CA.	Report	Anna Dimling, ERG	04/13/2016	ERG. 2016. Facility Contact Telecon: George Industries.	Metal Finishing, Part 433	2	No	No	MF00143
10.31	EPA-HQ-OW-2015-0665-0780	Facility Contact Telecon: General Motors LLC Toledo - DCN MF00144	Summary of telephone conversation with Joyce Arakelian about General Motors LLC in Toledo, OH.	Report	Anna Dimling, ERG	03/22/2016	ERG. 2016. Facility Contact Telecon: General Motors LLC Toledo.	Metal Finishing, Part 433	1	No	No	MF00144
10.31	EPA-HQ-OW-2015-0665-0781	Facility Contact Telecon: Graftech International Holdings, Inc. - DCN MF00145	Summary of telephone conversation with Juanita Bursley about GrafTech International Holdings Inc. in Parma, OH.	Report	Anna Dimling, ERG	03/23/2016	ERG. 2016. Facility Contact Telecon: Graftech International Holdings, Inc.	Metal Finishing, Part 433	2	No	No	MF00145

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0782	Facility Contact Telecon: Huntington Ingalls, Inc. - DCN MF00146	Summary of telephone conversation with Steve Brinkman about Huntington Ingalls, Inc. in Newport News, VA.	Report	Anna Dimling, ERG	04/20/2016	ERG. 2016. Facility Contact Telecon: Huntington Ingalls, Inc.	Metal Finishing, Part 433	3	No	No	MF00146
10.31	EPA-HQ-OW-2015-0665-0783	Facility Contact Telecon: Kokomo Transmission Plant - DCN MF00147	Summary of telephone conversation with Al Johnston about FCA US Kokomo Transmission Plant in Kokomo, IN.	Report	Anna Dimling, ERG	03/24/2016	ERG. 2016. Facility Contact Telecon: Kokomo Transmission Plant.	Metal Finishing, Part 433	6	No	No	MF00147
10.31	EPA-HQ-OW-2015-0665-0784	Facility Contact Telecon: Korns Galvanizing Co Inc. - DCN MF00148	Summary of telephone conversation with Barry Heider about Korns Galvanizing Co. Inc. in Johnstown, PA.	Report	Anna Dimling, ERG	03/23/2016	ERG. 2016. Facility Contact Telecon: Korns Galvanizing Co Inc.	Metal Finishing, Part 433	1	No	No	MF00148

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0785	Facility Contact Telecon: Marisco, LTD - DCN MF00149	Summary of telephone conversation with Steve Hinton about Marisco, LTD. in Kapolei, HI.	Report	Anna Dimling, ERG	03/18/2016	ERG. 2016. Facility Contact Telecon: Marisco, LTD.	Metal Finishing, Part 433	1	No	No	MF00149
10.31	EPA-HQ-OW-2015-0665-0786	Facility Contact Telecon: SGL Carbon Group - DCN MF00150	Summary of telephone conversation with Lee Gjetley about SGL Carbon Group (Great Lakes Carbon Corp.) in Morgantown, NC.	Report	Anna Dimling, ERG	03/22/2016	ERG. 2016. Facility Contact Telecon: SGL Carbon Group.	Metal Finishing, Part 433	1	No	No	MF00150
10.31	EPA-HQ-OW-2015-0665-0787	Facility Contact Telecon: Toray Carbon Fibers America Inc. - DCN MF00151	Summary of telephone conversation with Mike Conlon about Toray Carbon Fibers America Inc. in Decatur, AL.	Report	Anna Dimling, ERG	03/22/2016	ERG. 2016. Facility Contact Telecon: Toray Carbon Fibers America Inc.	Metal Finishing, Part 433	1	No	No	MF00151

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0788	Facility Contact Telecon: SRG Global Portageville facility - DCN MF00152	Summary of telephone conversation with Steve Sherriff about SRG Global in Portageville, MO.	Report	Anna Dimling, ERG	03/23/2016	ERG. 2016. Facility Contact Telecon: SRG Global Portageville facility.	Metal Finishing, Part 433	1	No	No	MF00152
10.31	EPA-HQ-OW-2015-0665-0789	Memorandum to Ahmar Siddiqui, EPA; Subject: Notes from the Meeting with SRG Global Inc. on June 15, 2016 - DCN MF00153	Final sanitized notes for Meeting with SRG Global Inc. on June 15, 2016.	Memorandum	Anna Dimling, ERG	10/06/2016	ERG. 2016. Memorandum to Ahmar Siddiqui, EPA; Subject: Notes from the Meeting with SRG Global Inc. on June 15, 2016.	Metal Finishing, Part 433	6	No	No	MF00153
10.31	EPA-HQ-OW-2015-0665-1097	DMR Data Analysis Database - DCN MF00154	Collected discharge monitoring report (DMR) data for 2010 through 2014 to perform various queries for DMR/TRI Phase I and Phase II Review.	Data	ERG	05/26/2017	ERG. 2017. DMR Data Analysis Database.	Metal Finishing, Part 433	0	No	No	MF00154

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1098	TRI Data Analysis Database - DCN MF00155	Collected toxics release inventory (TRI) data for 2010 through 2014 to perform various queries for DMR/TRI Phase I and Phase II Review.	Data	ERG	05/26/2017	ERG. 2017. TRI Data Analysis Database.	Metal Finishing, Part 433	0	No	No	MF00155
10.31	EPA-HQ-OW-2015-0665-1099	TRI Data Request Analyses Database - DCN MF00156	Underlying concentration data received from facilities supporting releases reported to TRI.	Data	ERG	05/26/2017	ERG. 2017. TRI Data Request Analyses Database.	Metal Finishing, Part 433	0	No	No	MF00156
10.31	EPA-HQ-OW-2015-0665-0790	Summary of Discussions with Local POTW Pretreatment Coordinators - DCN MF00157	Memorandum describing the discussion with Local POTW Pretreatment Coordinators during Utah Metal Finishing Site Visits in July 2016.	Report	Dan-Tam Nguyen, ERG	03/07/2017	ERG. 2017. Memorandum to U.S. EPA from ERG. Re: Summary of Discussions with Local POTW Pretreatment Coordinators.	Metal Finishing, Part 433	3	No	No	MF00157

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0972	Sanitized_Final Metal Finishing Site Visit Report for PB Fasteners - DCN MF00158	Final sanitized site visit report prepared by ERG from the site visit at PB Fasteners on May 17, 2016.	Report	U.S. EPA	03/07/2017	U.S. EPA. 2017. Sanitized Final Metal Finishing Site Visit Report for PB Fasteners.	Metal Finishing, Part 433	4	No	No	MF00158
10.31	EPA-HQ-OW-2015-0665-0988	Facility Comments on Draft Metal Finishing Site Visit Report from Northrop Grumman - DCN MF00159	Contains facility comments on draft report for site visit to Northrop Grunman	Report	Northrop Grunman	10/26/2016	Northrop Grunman. 2016. Facility Comments on Draft Metal Finishing Site Visit Report from Northrop Grumman.	Metal Finishing, Part 433	13	No	No	MF00159
10.31	EPA-HQ-OW-2015-0665-0971	CBI_Facility Comments on Draft Metal Finishing Site Visit Report from Carlisle Interconnect Technologies - DCN MF00160CBI	CBI_Contains facility comments on draft report for site visit to Carlisle Interconnect Technologies	Report	Carlisle	08/23/2016	Carlisle. 2016. Facility Comments on Draft Metal Finishing Site Visit Report from Carlisle Interconnect Technologies.	Metal Finishing, Part 433	18	Yes	No	MF00160

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0971.1	CBI_Carlisle Interconnect Technologies Cover Letter for Comments on Site Visit Report - DCN MF00160A1CBI	CBI_Contains notes on Carlisle's comments on the draft site visit report.	Report	Carlisle	08/23/2016	Carlisle. 2016. Carlisle Interconnect Technologies Cover Letter for Comments on Site Visit Report.	Metal Finishing, Part 433	1	Yes	No	MF00160A1
10.31	EPA-HQ-OW-2015-0665-0971.2	CBI_Sanitation Districts of Los Angeles County Industrial Wastewater Discharge Permit Data Sheet - DCN MF00160A2CBI	CBI_NPDES Permit data sheet for Carlisle Interconnect Technologies; approved April 3, 2013.	Permit, Registration	LA Sanitation Districts	04/02/2013	LA Sanitation Districts. 2013. Sanitation Districts of Los Angeles County Industrial Wastewater Discharge Permit Data Sheet.	Metal Finishing, Part 433	9	Yes	No	MF00160A2
10.31	EPA-HQ-OW-2015-0665-0971.3	CBI_Safety Data Sheets for Chemicals used at Carlisle Interconnect Technologies - DCN MF00160A3CBI	CBI_PDF containing 11 SDSs for Carlisle Interconnect Technologies	Report	Carlisle	08/23/2016	Carlisle. 2016. Safety Data Sheets for Chemicals used at Carlisle Interconnect Technologies.	Metal Finishing, Part 433	67	Yes	No	MF00160A3

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0989	Sanitized_Final Metal Finishing Site Visit Report for Carlisle Interconnect Technologies - DCN MF00161	Final Sanitized Site Visit Report prepared by ERG for site visit at Carlisle Interconnect Technologies on May 16, 2016.	Report	U.S. EPA	06/05/2017	U.S. EPA. 2017. Sanitized Final Site Visit Report for Carlisle Interconnect Technologies.	Metal Finishing, Part 433	11	No	No	MF00161
10.31	EPA-HQ-OW-2015-0665-0791	Metal Products and Machinery (MP&M) Rulemaking Preamble: Summary of Industry Comments and EPA Decisions Related to the Metal Finishing Category - DCN MF00162	Summary of the MP&M Rulemaking Preamble, specifically items relevant to metal finishing and electroplating industries.	Memorandum	Molly McEvoy, ERG	03/20/3017	ERG. 2017. Memorandum to U.S. EPA from ERG. Re: MP&M Rulemaking Preamble: Summary of Industry Comments and EPA Decisions Related to the MF Category	Metal Finishing, Part 433	10	No	No	MF00162
10.31	EPA-HQ-OW-2015-0665-0792	Metal Products and Machinery (MP&M) Rulemaking TDD: Review and Comparison of Wastewater Technologies, Pollutants of Concern, and Pollution Prevention Practice (P2) Considered in the MP&M and Metal Finishing Rulemakings - DCN MF00163	Summary of the MP&M Rulemaking technical development document; specifically, identifying changes in the state of the metal finishing industry, wastewater technologies, etc., between the Metal Finishing rulemaking and the of the MP&M rulemaking.	Memorandum	Molly McEvoy, ERG	03/10/3017	ERG. 2017. Memorandum to U.S. EPA from ERG. Re: MP&M TDD: Review and Comparison of Wastewater Technologies, POC, and P2 Practices Considered.	Metal Finishing, Part 433	17	No	No	MF00163



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10.31	EPA-HQ-OW-2015-0665-0793	Results of the Targeted Review of the MP&M Comment Response Document: Pollution Prevention and Wastewater Treatment Practices - DCN MF00164	Results of the targeted review of MP&M CRD. CRD was searched for the keyword "pollution prevention" and comments relevant to the metal finishing and electroplating industries are summarized.	Memorandum	Molly McEvoy, ERG	03/21/2017	ERG. 2017. Memorandum to U.S. EPA from ERG. Re: Results of the Targeted Review of the MP&M CRD: P2 and Wastewater Treatment Practices.	Metal Finishing, Part 433	3	No	No	MF00164
10.31	EPA-HQ-OW-2015-0665-0794	Results of the Pollution Prevention Targeted Literature Review for the Metal Finishing Industry - DCN MF00165	Memorandum summarizing a targeted literature search for pollution prevention (P2) practices used in the metal finishing industry.	Memorandum	Adam OrnDorff, ERG	03/22/2017	ERG. 2017. Memorandum to U.S. EPA, from ERG. Re: Results of the Pollution Prevention Targeted Literature Review for the MF Industry.	Metal Finishing, Part 433	6	No	No	MF00165
10.31	EPA-HQ-OW-2015-0665-0795	Results of the Pollution Prevention Data Collection using E3 Sources and Regional Contacts in the Metal Finishing Industry - DCN MF00166	Memorandum summarizing results from reviewing E3 and regional contact information concerning metal finishing P2 practices.	Memorandum	Anna Dimling, ERG	04/21/2017	ERG. 2017. Memorandum to U.S. EPA from ERG. Re: Results of the P2 Data Collection using E3 Sources and Regional Contacts in the MF Industry.	Metal Finishing, Part 433	12	No	No	MF00166

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10.31	EPA-HQ-OW-2015-0665-0796	2012 NAICS to SIC Crosswalk - DCN MF00167	NAICS to SIC Crosswalk	Data	NAICS	01/01/2012	NAICS. 2012. 2012 NAICS to SIC Crosswalk.	Metal Finishing, Part 433	63	No	No	MF00167
10.31	EPA-HQ-OW-2015-0665-1069	CBI_General Comments on Draft Metal Finishing Site Visit Report for Hill Air Force Base - DCN MF00168CBI	CBI_Contains general facility comments on draft report for site visit to Hill Air Force Base	Memorandum	Hill Air Force Base	04/27/2017	HAFB. 2017. CBI_General Comments on Draft Metal Finishing Site Visit Report for Hill Air Force Base.	Metal Finishing, Part 433	2	Yes	No	MF00168
10.31	EPA-HQ-OW-2015-0665-1069.1	CBI_Facility Comments on Draft Metal Finishing Site Visit Report for Hill Air Force Base from Richard Whalen and Mark Ross - DCN MF00168A1CBI	CBI_Contains facility comments on draft report for site visit to Hill Air Force Base from Richard Whalen and Mark Ross	Report	Hill Air Force Base	04/27/2017	HAFB. 2017. CBI_Facility Comments on Draft Metal Finishing Site Visit Report for Hill Air Force Base from Richard Whalen and Mark Ross.	Metal Finishing, Part 433	17	Yes	No	MF00168A1

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10.31	EPA-HQ-OW-2015-0665-1069.2	CBI_Facility Comments on Draft Metal Finishing Site Visit Report for Hill Air Force Base from Caroline LeClair and Barbara Hall - DCN MF00168A2CBI	CBI_Contains facility comments on draft report for site visit to Hill Air Force Base from Caroline LeClair and Barbara Hall	Report	Hill Air Force Base	04/27/2017	HAFB. 2017. CBI_Facility Comments on Draft Metal Finishing Site Visit Report for Hill Air Force Base from Caroline LeClair and Barbara Hall.	Metal Finishing, Part 433	25	Yes	No	MF00168A2
10.31	EPA-HQ-OW-2015-0665-1069.3	CBI_P2 Assessment of Building 505 - DCN MF00168A3CBI	CBI_Provides a pollution prevention (P2) assessment for building 505 at Hill Air Force Base.	Report	Hill Air Force Base	04/27/2017	HAFB. 2017. CBI_P2 Assessment of Building 505.	Metal Finishing, Part 433	20	Yes	No	MF00168A3
10.31	EPA-HQ-OW-2015-0665-1069.4	CBI_Industrial Waste Collection System (IWCS) Discharges from Hill Air Force Base - DCN MF00168A4CBI	CBI_Report that quantifies the amount of waste discharged to the industrial waste collection system (IWCS) at Hill Air Force Base	Report	Hill Air Force Base	03/31/2017	HAFB. 2017. CBI_Industrial Waste Collection System (IWCS) Discharges from Hill Air Force Base.	Metal Finishing, Part 433	726	Yes	No	MF00168A4

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0797	NAICS Association Webpage - DCN MF00169	NAICS Webpage	Data	NAICS	01/01/2015	NAICS. 2015. NAICS Association Webpage. Accessed: December 30, 2015.	Metal Finishing, Part 433	4	No	No	MF00169
10.31	EPA-HQ-OW-2015-0665-1075	CBI_Facility Comments on Draft Metal Finishing Hill Air Force Base Site Visit Report - Second Round - DCN MF00170CBI	CBI_Second round of facility comments on draft report (D3) for EPA's site visit to Hill Air Force Base.	Report	Hill Air Force Base	07/26/2017	HAFB. 2017. CBI_Facility Comments on Draft Metal Finishing Hill Air Force Base Site Visit Report - Second Round.	Metal Finishing, Part 433	28	Yes	No	MF00170
10.31	EPA-HQ-OW-2015-0665-1070	CBI_Facility Comments on Draft Metal Finishing Site Visit Report for Pilkington Metal Finishing LLC - DCN MF00171CBI	CBI_Contains facility comments on draft report for site visit to Pilkington Metal Finishing	Report	Pilkington	05/22/2017	Pilkington. 2017. Facility Comments on Draft Metal Finishing Site Visit Report for Pilkington Metal Finishing LLC.	Metal Finishing, Part 433	29	Yes	No	MF00171

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1070.1	CBI_Cover Letter for Pilkington Metal Finishing LLC Draft Site Visit Report Comments - DCN MF00171A1CBI	CBI_Cover letter explaining the comments Pilkington made in the draft site visit report.	Memorandum	Pilkington	05/12/2017	Pilkington. 2017. Cover Letter for Pilkington Metal Finishing LLC Draft Site Visit Report Comments.	Metal Finishing, Part 433	1	Yes	No	MF00171A1
10.31	EPA-HQ-OW-2015-0665-1070.2	CBI_Wastewater Treatment System Costs at Pilkington Metal Finishing LLC - DCN MF00171A2CBI	CBI_Provides a list of operating and maintenance cost and capital replacement costs for the wastewater treatment system at Pilkington.	Data	Pilkington	05/22/2017	Pilkington. 2017. Wastewater Treatment System Costs at Pilkington Metal Finishing LLC.	Metal Finishing, Part 433	0	Yes	No	MF00171A2
10.31	EPA-HQ-OW-2015-0665-1070.3	CBI_SDSs for Pilkington Metal Finishing LLC - DCN MF00171A3CBI	CBI_Provides the SDS's for 57 chemicals used at Pilkington Metal Finishing LLC.	Data	Pilkington	05/22/2017	Pilkington. 2017. SDSs for Pilkington Metal Finishing LLC.	Metal Finishing, Part 433	0	Yes	No	MF00171A3

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1071	CBI_Telecon with OC Tanner Comments on the Draft Site Visit Report - DCN MF00172CBI	CBI_Contains facility comments on draft report for site visit to O.C. Tanner Manufacturing Company	Meeting Materials	O.C. Tanner	04/17/2017	O.C. Tanner. 2017. CBI_Telecon with OC Tanner Comments on the Draft Site Visit Report.	Metal Finishing, Part 433	2	Yes	No	MF00172
10.31	EPA-HQ-OW-2015-0665-1071.1	CBI_Notes on the Draft OC Tanner Site Visit Report According to Telephone Conversation - DCN MF00172A1CBI	CBI_Provides the draft OC Tanner Site Visit Report that was sent to the facility with comments and updates that were relayed over a phone conversation with Annette George of OC Tanner.	Memorandum	O.C. Tanner	04/17/2017	O.C. Tanner. 2017. CBI_Notes on the Draft OC Tanner Site Visit Report According to Telephone Conversation.	Metal Finishing, Part 433	22	Yes	No	MF00172A1
10.31	EPA-HQ-OW-2015-0665-1072	Facility Comments on Draft Metal Finishing Site Visit Report for Varian Medical Systems X-Ray Products - DCN MF00173	Contains facility comments on draft report for site visit to Varian Medical Systems X-Ray Products	Report	Varian	03/28/2017	Varian. 2017. Facility Comments on Draft Metal Finishing Site Visit Report for Varian Medical Systems X-Ray Products.	Metal Finishing, Part 433	12	No	No	MF00173

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1072.1	Email from Jason Kyle to Molly McEvoy. Subject: FW: MF Deliverable: Varian Medical Systems X-Ray Products Draft Site Visit Report for Visit in July 2016 - DCN MF00173A1	Email from Jason Kyle indicating that the report is no longer CBI.	Email	Varian	04/04/2017	Varian. 2017. Email from Jason Kyle to Molly McEvoy. Subject: Varian Medical Systems X-Ray Products Draft SVR for Visit in July 2016.	Metal Finishing, Part 433	5	No	No	MF00173A1
10.31	EPA-HQ-OW-2015-0665-1073	Facility Comments on Draft Metal Finishing Site Visit Report for Plymouth Plating Works - DCN MF00174	Telecon contains facility comments on draft report for site visit to Plymouth Plating Works provided over the phone on May 11, 2017.	Report	Plymouth Plating	05/11/2017	Plymouth Plating. 2017. Facility Comments on Draft Metal Finishing Site Visit Report for Plymouth Plating Works.	Metal Finishing, Part 433	1	No	No	MF00174
10.31	EPA-HQ-OW-2015-0665-1074	CBI_Facility Comments on Draft Metal Finishing Site Visit Report for KC Jones Plating Company - DCN MF00175CBI	CBI_Contains facility comments on draft report for site visit to KC Jones Plating Company	Report	KC Jones	02/28/2017	KC Jones. 2017. CBI_Facility Comments on Draft Metal Finishing Site Visit Report for KC Jones Plating Company.	Metal Finishing, Part 433	22	Yes	No	MF00175

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1074.1	CBI_Cover Letter for KC Jones Plating Company Draft Site Visit Report Comments - DCN MF00175A1CBI	CBI_Cover letter explaining the comments KC Jones made in the draft site visit report.	Report	KC Jones	03/23/2017	KC Jones. 2017. CBI_Cover Letter for KC Jones Plating Company Draft Site Visit Report Comments.	Metal Finishing, Part 433	6	Yes	No	MF00175A1
10.31	EPA-HQ-OW-2015-0665-1074.2	Emails from KC Jones with Comments on KC Jones Plating Company Site Visit Report - DCN MF00175A2	Email documentation of KC Jones Plating Company Comment on the draft site visit report.	Email	KC Jones	03/28/2017	KC Jones. 2017. Emails from KC Jones with Comments on KC Jones Plating Company Site Visit Report.	Metal Finishing, Part 433	3	No	No	MF00175A2
10.31	EPA-HQ-OW-2015-0665-1074.3	CBI_CBI Claims from KC Jones for Site Visit Report - DCN MF00175A3CBI	CBI_Letter from KC Jones Plating Company containing CBI claims for the KC Jones Site Visit Report	Report	KC Jones	05/30/2017	KC Jones. 2017. CBI_CBI Claims from KC Jones for Site Visit Report.	Metal Finishing, Part 433	1	Yes	No	MF00175A3



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1076	CBI_Facility Comments on Draft Metal Finishing Site Visit Report for AJAX Metal Processing - DCN MF00176CBI	CBI_Contains facility comments on draft report for site visit to AJAX Metal Processing	Report	AJAX Metal	01/27/2017	AJAX Metal. 2017. CBI_Facility Comments on Draft Metal Finishing Site Visit Report for AJAX Metal Processing.	Metal Finishing, Part 433	14	Yes	No	MF00176
10.31	EPA-HQ-OW-2015-0665-1076.1	CBI AJAX Facility Comments on Sit Visit Report Cover Letter - DCN MF00176.A1	CBI_Contains cover letter for facility comments on the draft report for site visit to AJAX Metal Processing. Also includes additional information requested by EPA and ERG, such as costs and plating rates.	Data	Frank Buono	04/04/2017	Buono, F. 2017. CBI AJAX Facility Comments on Site Visit Report Cover Letter.	Metal Finishing, Part 433	4	Yes	No	MF00176A1
10.31	EPA-HQ-OW-2015-0665-1076.2	CBI_SDSs for AJAX Metal Processing - DCN MF00176.A2	Contains two SDSs for AJAX Metal Processing.	Data	AJAX Metal Processing	04/04/2017	AJAX Metal. 2017. CBI_SDSs for AJAX Metal Processing.	Metal Finishing, Part 433	22	Yes	No	MF00176A2

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1077	CBI_Facility Comments on Draft Metal Finishing Site Visit Report for Ford Flat Rock - DCN MF00177CBI	CBI_Contains facility comments on draft report for site visit to Ford Flat Rock	Report	Ford Flat Rock	04/20/2017	Ford Flat Rock. 2017. CBI_Facility Comments on Draft Metal Finishing Site Visit Report for Ford Flat Rock.	Metal Finishing, Part 433	14	Yes	No	MF00177
10.31	EPA-HQ-OW-2015-0665-1077.1	CBI_Ford Flat Rock Industrial Pretreatment Report - DCN MF00177.A1CBI	CBI_Containd Industrial Pretreatment Report for Ford Flat Rock	Memorandum	Ford Flat Rock	04/21/2017	Ford Flat Rock. 2017. CBI_Ford Flat Rock Industrial Pretreatment Report.	Metal Finishing, Part 433	57	Yes	No	MF00177A1
10.31	EPA-HQ-OW-2015-0665-1077.2	CBI_Safety Data Sheets - DCN MF00177.A2CBI	CBI_Safety Data Sheet for Ford Flat Rock plating chemicals.	Memorandum	Ford Flat Rock	04/22/2017	Ford Flat Rock. 2017. CBI_Safety Data Sheets.	Metal Finishing, Part 433	87	Yes	No	MF00177A2

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1078	CBI_Facility Comments on Draft Metal Finishing Site Visit Report for Elm Plating - DCN MF00178CBI	CBI_Contains facility comments on draft report for site visit to Elm Plating and additional information submitted by the facility.	Report	Elm Plating	04/21/2017	Elm Plating. 2017. CBI_Facility Comments on Draft Metal Finishing Site Visit Report for Elm Plating.	Metal Finishing, Part 433	3	Yes	No	MF00178
10.31	EPA-HQ-OW-2015-0665-1078.1	CBI_Draft Report Comments - DCN MF00178.A1CBI	CBI_Facility comments to the Draft Site Visit Report for the site visit to Elm Plating on August 17, 2016.	Report	Elm Plating	04/21/2017	Elm Plating. 2017. CBI_Draft Report Comments.	Metal Finishing, Part 433	4	Yes	No	MF00178A1
10.31	EPA-HQ-OW-2015-0665-1078.2	CBI_Discharge Monitoring Analytical Report - DCN MF00178.A2CBI	CBI_Contains discharge monitoring analytical reports for Elm Plating.	Data	Elm Plating	04/21/2017	Elm Plating. 2017. CBI_Discharge Monitoring Analytical Report.	Metal Finishing, Part 433	31	Yes	No	MF00178A2

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1078.3	CBI_Operating Costs - DCN MF00178.A3CBI	CBI_Contains Operating costs for the Elm Plating industrial wastewater pretreatment system.	Data	Elm Plating	04/21/2017	Elm Plating. 2017. CBI_Operating Costs.	Metal Finishing, Part 433	2	Yes	No	MF00178A3
10.31	EPA-HQ-OW-2015-0665-1078.4	CBI_SDS for Substances Entering Treatment - DCN MF00178.A4CBI	CBI_Contains Safety Data Sheets for chemical entering the Elm Plating industrial wastewater pretreatment system.	Data	Elm Plating	04/21/2017	Elm Plating. 2017. CBI_SDS for Substances Entering Treatment.	Metal Finishing, Part 433	201	Yes	No	MF00178A4
10.31	EPA-HQ-OW-2015-0665-1034	Facility Comments on Draft Metal Finishing Site Visit Report for Trion Coatings - DCN MF00179	Contains facility comments on draft report for site visit to Trion Coatings	Report	Trion Coatings	03/20/2017	Trion Coatings. 2017. Facility Comments on Draft Metal Finishing Site Visit Report for Trion Coatings.	Metal Finishing, Part 433	4	No	No	MF00179

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1034.1	Email from Trion Coatings with Comments on KC Jones Plating Company - DCN MF00179A1	Email documentation of Trion Coatings comments on the draft site visit report.	Email	Doug Morrison, IonicLiquid TrionCoating	03/20/2017	Trion Coatings. 2017. Email from Trion Coatings with Comments on KC Jones Plating Company.	Metal Finishing, Part 433	2	No	No	MF00179A1
10.31	EPA-HQ-OW-2015-0665-1079	CBI_Facility Comments on Draft Metal Finishing Site Visit Report for Methode Electronics, Inc. - DCN MF00180CBI	CBI_Contains facility comments on draft report for site visit to Methode Electronics, Inc.	Report	Methode	05/01/2017	Methode. 2017. CBI_Facility Comments on Draft Metal Finishing Site Visit Report for Methode Electronics, Inc..	Metal Finishing, Part 433	26	Yes	No	MF00180
10.31	EPA-HQ-OW-2015-0665-0990	Facility Comments on Draft Metal Finishing Site Visit Report for Eagle Electronics - DCN MF00181	Contains facility comments on the draft report for the site visit to Eagle Electronics on August 18, 2016.	Report	Eagle Electronics	04/17/2017	Eagle Electronics. 2017. Facility Comments on Draft Metal Finishing Site Visit Report for Eagle Electronics.	Metal Finishing, Part 433	3	No	No	MF00181

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0991	CBI_Facility Comments on Draft Metal Finishing Site Visit Report for Metal Impact LLC - DCN MF00182	CBI_Contains facility comments on draft report for site visit to Metal Impact LLC	Report	Metal Impact LLC	03/17/2017	Metal Impact LLC. 2017. CBI_Facility Comments on Draft Metal Finishing Site Visit Report for Metal Impact LLC.	Metal Finishing, Part 433	16	Yes	No	MF00182
10.31	EPA-HQ-OW-2015-0665-0992	CBI_Facility Comments on Draft Metal Finishing Site Visit Report for Magnetic Inspection Laboratory - DCN MF00183	CBI_Contains facility comments on draft report for site visit to Magnetic Inspection Laboratory	Memorandum	MIL	03/24/2017	MIL. 2017. CBI_Facility Comments on Draft Metal Finishing Site Visit Report for Magnetic Inspection Laboratory.	Metal Finishing, Part 433	16	Yes	No	MF00183
10.31	EPA-HQ-OW-2015-0665-0993	Sanitized_Final Metal Finishing Site Visit Report for Hill Air Force Base - DCN MF00184	Final sanitized site visit report prepared by ERG from the site visit at Hill Air Force Base on July 11, 2016.	Report	U.S. EPA	08/24/2017	U.S. EPA. 2017. Sanitized Final Metal Finishing Site Visit Report for Hill Air Force Base.	Metal Finishing, Part 433	13	No	No	MF00184

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0994	Sanitized_Final Metal Finishing Site Visit Report for Williams International - DCN MF00185	Final sanitized site visit report prepared by ERG from the site visit at Williams International on July 12, 2016.	Report	U.S. EPA	07/31/2017	U.S. EPA. 2017. Sanitized Final Metal Finishing Site Visit Report for Williams International.	Metal Finishing, Part 433	4	No	No	MF00185
10.31	EPA-HQ-OW-2015-0665-0995	Sanitized_Final Metal Finishing Site Visit Report for Blanchard Metal Processing - DCN MF00186	Final sanitized site visit report prepared by ERG from the site visit at Blanchard Metal Processing on July 13, 2016.	Report	U.S. EPA	01/12/2017	U.S. EPA. 2017. Sanitized Final Metal Finishing Site Visit Report for Blanchard Metal Processing.	Metal Finishing, Part 433	4	No	No	MF00186
10.31	EPA-HQ-OW-2015-0665-0996	Sanitized_Final Metal Finishing Site Visit Report for Pilkington Metal Finishing LLC - DCN MF00187	Final sanitized site visit report prepared by ERG from the site visit at Pilkington Metal Finishing LLC on July 13, 2016.	Report	U.S. EPA	05/30/2017	U.S. EPA. 2017. Sanitized Final Metal Finishing Site Visit Report for Pilkington Metal Finishing LLC.	Metal Finishing, Part 433	25	No	No	MF00187

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0997	Sanitized_Final Metal Finishing Site Visit Report for O.C. Tanner Manufacturing Company - DCN MF00188	Final sanitized site visit report prepared by ERG from the site visit at O.C. Tanner Manufacturing Company on July 14, 2016.	Report	U.S. EPA	06/21/2017	U.S. EPA. 2017. Sanitized Final Metal Finishing Site Visit Report for O.C. Tanner Manufacturing Company.	Metal Finishing, Part 433	13	No	No	MF00188
10.31	EPA-HQ-OW-2015-0665-1035	Sanitized_Final Metal Finishing Site Visit Report for KC Jones Plating Company - DCN MF00189	Final sanitized site visit report prepared by ERG from the site visit at KC Jones Plating Company on August 15, 2016.	Report	U.S. EPA	07/14/2017	U.S. EPA. 2017. Sanitized Final Metal Finishing Site Visit Report for KC Jones Plating Company.	Metal Finishing, Part 433	9	No	No	MF00189
10.31	EPA-HQ-OW-2015-0665-1036	Sanitized_Final Metal Finishing Site Visit Report for AJAX Metal Processing - DCN MF00190	Final sanitized site visit report prepared by ERG from the site visit at AJAX Metal Processing on August 16, 2016.	Report	U.S. EPA	07/14/2017	U.S. EPA. 2017. Sanitized Final Metal Finishing Site Visit Report for AJAX Metal Processing.	Metal Finishing, Part 433	7	No	No	MF00190



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1037	Sanitized_Final Metal Finishing Site Visit Report for Ford Flat Rock - DCN MF00191	Final sanitized site visit report prepared by ERG from the site visit at Ford Flat Rock on August 16, 2016.	Report	U.S. EPA	07/14/2017	U.S. EPA. 2017. Sanitized Final Metal Finishing Site Visit Report for Ford Flat Rock.	Metal Finishing, Part 433	11	No	No	MF00191
10.31	EPA-HQ-OW-2015-0665-0798	Occupational Safety & Health Administration. Standard Industrial Classification (SIC) System Search - DCN MF00193	OSHA SIC system search.	Data	OSHA	12/11/2015	OSHA. 2015. Occupational Safety & Health Administration. Standard Industrial Classification (SIC) System Search. Accessed: December 11, 2015.	Metal Finishing, Part 433	1	No	No	MF00193
10.31	EPA-HQ-OW-2015-0665-1038	Sanitized_Final Metal Finishing Site Visit Report for Magnetic Inspection Laboratory - DCN MF00195	Final sanitized site visit report prepared by ERG from the site visit at Magnetic Inspection Laboratory on August 19, 2016.	Report	U.S. EPA	07/10/2017	U.S. EPA. 2017. Sanitized Final Metal Finishing Site Visit Report for Magnetic Inspection Laboratory Inc.	Metal Finishing, Part 433	16	No	No	MF00195

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0799	Sanitized_Final Metal Finishing Site Visit Report for Metal Impact LLC - DCN MF00196	Final sanitized site visit report prepared by ERG from the site visit at Metal Impact on August 19, 2016.	Report	U.S. EPA	05/24/2017	U.S. EPA. 2017. Sanitized Final Metal Finishing Site Visit Report for Metal Impact LLC.	Metal Finishing, Part 433	11	No	No	MF00196
10.31	EPA-HQ-OW-2015-0665-1039	CBI_Carlisle Waste Process Flow Diagram - DCN MF00197CBI	CBI_Provides the Carlisle, El Segundo Wastewater Treatment Diagram that is presented in the final site visit report.	Data	Carlisle	08/23/2016	Carlisle. 2016. Carlisle Waste Process Flow Diagram.	Metal Finishing, Part 433	3	Yes	No	MF00197
10.31	EPA-HQ-OW-2015-0665-1040	Northrop Grumman Building D1 Plating Shop Chemical SDSs - DCN MF00198	Provides 8 Safety Data Sheets (SDSs) used in Northrop Grumman's Building D1	Data	Northrop Grumman	10/26/2016	Northrop Grumman. 2016. Northrop Grumman Building D1 Plating Shop Chemical SDSs.	Metal Finishing, Part 433	44	No	No	MF00198

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0998	Northrop Grumman Building M3 Plating Shop Chemical SDSs - DCN MF00199	Provides 56 Safety Data Sheets (SDSs) used in Northrop Grumman's Building M3	Data	Northrop Grumman	10/26/2016	Northrop Grunman. 2016. Northrop Grumman Building M3 Plating Shop Chemical SDSs.	Metal Finishing, Part 433	298	No	No	MF00199
10.31	EPA-HQ-OW-2015-0665-0999	Northrop Grumman Industrial Wastewater Self Monitoring Report for Building D1 - DCN MF00200	Provides monitoring data from 10/1/2015 to 12/31/2015 for Northrop Grumman in Manhattan Beach, California. Self monitoring report is a part of Northrop Grumman's permit.	Data	LA Sanitation District	01/15/2016	LA Sanitation District. 2016. Northrop Grumman Industrial Wastewater Self Monitoring Report for Building D1.	Metal Finishing, Part 433	24	No	No	MF00200
10.31	EPA-HQ-OW-2015-0665-0999.1	Northrop Grumman Industrial Wastewater Permit Data Sheet for Building D1 - DCN MF00200A1	Permit data sheet for Northrop Grumman's Building D1 in Manhattan Beach, California. Provides sample points and federal regulation information for each segregated waste stream. Also provides parameter, frequency, method, and units for samples required by their permit.	Permit, Registration	LA Sanitation District	03/08/2016	LA Sanitation District. 2016. Northrop Grumman Industrial Wastewater Permit Data Sheet for Building D1.	Metal Finishing, Part 433	10	No	No	MF00200A1

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1000	Northrop Grumman Industrial Wastewater Self Monitoring Report for Building M3 - DCN MF00201	Provides monitoring data from 10/1/2015 to 12/31/2015 for Northrop Grumman in Redondo Beach, California. Self monitoring report is a part of Northrop Grumman's permit.	Data	LA Sanitation District	01/15/2016	LA Sanitation District. 2016. Northrop Grumman Industrial Wastewater Self Monitoring Report for Building M3.	Metal Finishing, Part 433	16	No	No	MF00201
10.31	EPA-HQ-OW-2015-0665-1000.1	Northrop Grumman Industrial Wastewater Permit Data Sheet for Building M3 - DCN MF00201A1	Permit data sheet for Northrop Grumman's Building M3 in Manhattan Beach, California. Provides sample points and federal regulation information for each segregated waste stream. Also provides parameter, frequency, method, and units for samples required by	Permit, Registration	LA Sanitation District	01/13/2016	LA Sanitation District. 2016. Northrop Grumman Industrial Wastewater Permit Data Sheet for Building M3.	Metal Finishing, Part 433	10	No	No	MF00201A1
10.31	EPA-HQ-OW-2015-0665-1001	Northrop Grumman's Building M3 Wastewater Treatment Flow Diagram - DCN MF00202	Provides process flow diagram for Northrop Grumman's Building M3 wastewater treatment system in Manhattan Beach, California.	Data	Northrop Grumman	10/26/2016	Northrop Grumman. 2016. Northrop Grumman's Building M3 Wastewater Treatment Flow Diagram	Metal Finishing, Part 433	1	No	No	MF00202

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1001.1	Northrop Grumman Map of Buildings in California - DCN MF00202A1	Provides an overhead view of Northrop Grumman's buildings in California.	Data	Northrop Grumman	05/03/2004	Northrop Grunman. 2004. Northrop Grumman Map of Buildings in California.	Metal Finishing, Part 433	1	No	No	MF00202A1
10.31	EPA-HQ-OW-2015-0665-1002	Email Correspondence with Northrop Grumman - DCN MF00203	Provides several emails between Northrop Grumman's Mark Bordelon and Ahmar Siddiqui, EPA.	Email	Northrop Grumman	07/08/2016	Northrop Grunman. 2016. Email Correspondence with Northrop Grumman.	Metal Finishing, Part 433	5	No	No	MF00203
10.31	EPA-HQ-OW-2015-0665-1003	CBI_Wastewater Treatment Flow Diagram for PB Fasteners and Nondisclosure Agreement - DCN MF00204CBI	CBI_Provides signed visitor nondisclosure agreement for ERG and wastewater treatment diagrams for PB Fasteners	Data	PB Fasteners	05/17/2016	PB Fasteners. 2016. Wastewater Treatment Flow Diagram for PB Fasteners and Nondisclosure Agreement.	Metal Finishing, Part 433	6	Yes	No	MF00204

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1041	CBI_Industrial Discharge Permit for Hill Air Force Base - DCN MF00205CBI	CBI_Provides industrial discharge permit specification for Hill Air Force, such as effluent limitations, reporting requirements, and sampling specifications.	Permit, Registration	North Davis Sewer	08/01/2014	North Davis Sewer. 2014. CBI_Industrial Discharge Permit for Hill Air Force Base.	Metal Finishing, Part 433	23	Yes	No	MF00205
10.31	EPA-HQ-OW-2015-0665-1041.1	CBI_Analytical Data Reports for Permit Monitoring at Hill Air Force - DCN MF00205A1CBI	CBI_Contains 2014 through 2016 data on permit sampling data collected at various sample points at Hill Air Force Base.	Data	Stantec Consulting, Inc.	08/29/2016	Stantec Consulting, Inc.. 2016. CBI_Analytical Data Reports for Permit Monitoring at Hill Air Force.	Metal Finishing, Part 433	1714	Yes	No	MF00205A1
10.31	EPA-HQ-OW-2015-0665-1041.2	CBI_Analytical Data Spreadsheet for Permit Monitoring at Hill Air Force - DCN MF00205A2CBI	CBI_Contains 2003 through 2016 data on permit sampling data collected from the industrial wastewater treatment plant sampling point for Al, As, Cd, Cr, Cu, CN, Pb, Hg, Mo, Ni, Se, Ag, Zn, TTO, pH, TSS, O&G, BOD, COD, and PCB.	Data	Hill Air Force Base	08/31/2016	Hill Air Force Base. 2016. CBI_Analytical Data Spreadsheet for Permit Monitoring at Hill Air Force.	Metal Finishing, Part 433		Yes	No	MF00205A2

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1042	CBI_Process Details, Wastewater Generation, and Analytical Data for Building 505 and 507 at Hill Air Force Base - DCN MF00206CBI	CBI_Provides each process schematic at Hill Air Force Building 505 and 507 and describes that type of process, chemicals, wastewater generation, and analytical data sample results.	Data	Hill Air Force Base	08/29/2016	Hill Air Force Base. 2016. CBI_Process Details, Wastewater Generation, and Analytical Data for Building 505 and 507 at Hill Air Force Base.	Metal Finishing, Part 433	90	Yes	No	MF00206
10.31	EPA-HQ-OW-2015-0665-1043	CBI_SDSs for Hill Air Force Base - DCN MF00207CBI	CBI_Contains 6 SDSs for Zinc Nickel Plating and Chromate Conversion Coating chemicals	Data	Dipsol of America, Inc.	08/29/2016	Dipsol of America, Inc.. 2016. CBI_SDSs for Hill Air Force Base.	Metal Finishing, Part 433	37	Yes	No	MF00207
10.31	EPA-HQ-OW-2015-0665-1044	CBI_Email Correspondence with Hill Air Force Base - DCN MF00208CBI	Email correspondence between Ahmar Siddiqui and Barbara Hall about additional information Hill Air Force Base provided to supplement the site visit report.	Email	HAFB	08/26/2016	HAFB. 2016. CBI_Email Correspondence with Hill Air Force Base.	Metal Finishing, Part 433	5	Yes	No	MF00208

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1045	Industrial Wastewater Discharge Permit for Williams International - DCN MF00209	Provides effluent limitations, monitoring/reporting requirements, and other conditions required by Williams International's Industrial Wastewater Discharge Permit.	Permit, Registration	Central Weber Sewer	12/11/2012	Central Weber Sewer. 2012. Industrial Wastewater Discharge Permit for Williams International.	Metal Finishing, Part 433	17	No	No	MF00209
10.31	EPA-HQ-OW-2015-0665-1046	Wastewater Treatment System Photos at Blanchard Metal Processing - DCN MF00210	Andra Ahrens, Salt Lake City Pretreatment Coordinator, provided ERG with photos of the wastewater treatment system because it was enclosed and the tanks were not visible during the site visit.	Data	Blanchard	04/12/2012	Blanchard. 2012. Wastewater Treatment System Photos at Blanchard Metal Processing.	Metal Finishing, Part 433	4	No	No	MF00210
10.31	EPA-HQ-OW-2015-0665-1046.1	Blanchard Metal Processing Plant Layout - DCN MF00210A1	Provides an aerial view of the Blanchard Metal Processing plant included tanks, floor drains, direct drain of non-contact water, and raised floor drains.	Data	Blanchard	03/17/2008	Blanchard. 2008. Blanchard Metal Processing Plant Layout.	Metal Finishing, Part 433	1	No	No	MF00210A1



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1047	Industrial Wastewater Discharge Permit for Blanchard Metal Processing - DCN MF00211	Provides effluent limitations, monitoring/reporting requirements, and other conditions required Blanchard Metal Processing's Industrial Wastewater Discharge Permit.	Permit, Registration	SLC Reclamation Plant	12/15/2014	SLC Reclamation Plant. 2014. Industrial Wastewater Discharge Permit for Blanchard Metal Processing.	Metal Finishing, Part 433	43	No	No	MF00211
10.31	EPA-HQ-OW-2015-0665-1047.1	Wastewater Discharge Permit Application and Baseline Monitoring Report at Blanchard Metal Processing - DCN MF00211A1	Application for Blanchard Metal Processing's industrial wastewater discharge permit.	Permit, Registration	Salt Lake Water	12/14/2012	Salt Lake Water. 2012. Wastewater Discharge Permit Application and Baseline Monitoring Report at Blanchard Metal Processing.	Metal Finishing, Part 433	20	No	No	MF00211A1
10.31	EPA-HQ-OW-2015-0665-1047.2	Annual Pretreatment Inspection for Blanchard Metal Processing - DCN MF00211A2	Contains annual pretreatment inspection of water usage, wastewater handling, chemical and waste production, self-monitoring, and other permit specifications.	Report	Karl Hartman	01/15/2015	Hartman, K. 2015. Annual Pretreatment Inspection for Blanchard Metal Processing.	Metal Finishing, Part 433	18	No	No	MF00211A2

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1047.3	Verification for Applicable Standards for Blanchard Metal Processing - DCN MF00211A3	Checklist to determine whether Blanchard Metal Processing should still be regulated under 40 CFR 413 (Electroplating) instead of 40 CFR 433 (Metal Finishing).	Report	Salt Lake Water	02/11/2014	Salt Lake Water. 2014. Verification for Applicable Standards for Blanchard Metal Processing.	Metal Finishing, Part 433	3	No	No	MF00211A3
10.31	EPA-HQ-OW-2015-0665-1047.4	Request for an Alternative to Sampling for the Full List of TTO at Blanchard Metal Processing - DCN MF00211A4	Provides sampling results for May 2011 at Blanchard Metal Processing for TTO. This was sent to the pretreatment coordinator.	Memorandum	Blanchard	06/13/2011	Blanchard. 2011. Request for an Alternative to Sampling for the Full List of TTO at Blanchard Metal Processing.	Metal Finishing, Part 433	8	No	No	MF00211A4
10.31	EPA-HQ-OW-2015-0665-1048	Sampling Results for Blanchard Metal Processing - DCN MF00212	Provides sample concentrations for Blanchard Metal Processing from September 2008 through March 2016. Contains sample results for Cd, Cr, Cu, Pb, Ni, pH, Ag, Zn, CN, and total metals.	Data	Blanchard	07/06/2016	Blanchard. 2016. Sampling Results for Blanchard Metal Processing.	Metal Finishing, Part 433		No	No	MF00212

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1004	CBI_Anodize, Dye, and Seal SDSs for Pilkington Metal Finishing - DCN MF00213CBI	CBI_Contains 21 SDSs for anodizing, dye, and seal chemicals used at Pilkington Metal Finishing	Data	Pilkington	07/13/2016	Pilkington. 2016. Anodize, Dye, and Seal SDSs for Pilkington Metal Finishing.	Metal Finishing, Part 433	155	Yes	No	MF00213
10.31	EPA-HQ-OW-2015-0665-1004.1	CBI_Cleaning and Etching SDSs for Pilkington Metal Finishing - DCN MF00213A1CBI	CBI_Contains 11 SDSs for cleaning and etching chemicals used at Pilkington Metal Finishing	Data	Pilkington	07/13/2016	Pilkington. 2016. Cleaning and Etching SDSs for Pilkington Metal Finishing.	Metal Finishing, Part 433	78	Yes	No	MF00213A1
10.31	EPA-HQ-OW-2015-0665-1004.2	CBI_Conversion Coating SDSs for Pilkington Metal Finishing - DCN MF00213A2CBI	CBI_Contains 7 SDSs for conversion coating chemicals used at Pilkington Metal Finishing	Data	Pilkington	07/13/2016	Pilkington. 2016. Conversion Coating SDSs for Pilkington Metal Finishing.	Metal Finishing, Part 433	40	Yes	No	MF00213A2

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1004.3	CBI_Electropolish, Passivation, and Heat Treat SDSs for Pilkington Metal Finishing - DCN MF00213A3CBI	CBI_Contains 4 SDSs for electropolish, passivation, and heat treat chemicals used at Pilkington Metal Finishing	Data	Pilkington	07/13/2016	Pilkington. 2016. Electropolish, Passivation, and Heat Treat SDSs for Pilkington Metal Finishing.	Metal Finishing, Part 433	20	Yes	No	MF00213A3
10.31	EPA-HQ-OW-2015-0665-1004.4	CBI_Refurbishment SDSs for Pilkington Metal Finishing - DCN MF00213A4CBI	CBI_Contains 7 SDSs for refurbishment chemicals used at Pilkington Metal Finishing	Data	Pilkington	07/13/2016	Pilkington. 2016. Refurbishment SDSs for Pilkington Metal Finishing.	Metal Finishing, Part 433	43	Yes	No	MF00213A4
10.31	EPA-HQ-OW-2015-0665-1004.5	CBI_Wastewater Treatment SDSs for Pilkington Metal Finishing - DCN MF00213A5CBI	CBI_Contains 7 SDSs for wastewater treatment chemicals used at Pilkington Metal Finishing	Data	Pilkington	07/13/2016	Pilkington. 2016. Wastewater Treatment SDSs for Pilkington Metal Finishing.	Metal Finishing, Part 433	46	Yes	No	MF00213A5

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1080	CBI_Building 1 Tank Diagram for Pilkington Metal Finishing - DCN MF00214CBI	CBI_Tank diagram of process line in building 1 with numbered tanks corresponding to chemical processing tank contents.	Data	Pilkington	07/13/2016	Pilkington. 2016. Building 2 Tank Diagram for Pilkington Metal Finishing.	Metal Finishing, Part 433	1	Yes	No	MF00214
10.31	EPA-HQ-OW-2015-0665-1080.1	CBI_Building 2 Tank Diagram for Pilkington Metal Finishing - DCN MF00214A1CBI	CBI_Tank diagram of process line in building 2 with numbered tanks corresponding to chemical processing tank contents.	Data	Pilkington	07/13/2016	Pilkington. 2016. Building 1 Tank Diagram for Pilkington Metal Finishing.	Metal Finishing, Part 433	1	Yes	No	MF00214A1
10.31	EPA-HQ-OW-2015-0665-1080.2	CBI_Building 3 Tank Diagram for Pilkington Metal Finishing - DCN MF00214A2CBI	CBI_Tank diagram of process line in building 3 with numbered tanks corresponding to chemical processing tank contents.	Data	Pilkington	07/13/2016	Pilkington. 2016. Building 3 Tank Diagram for Pilkington Metal Finishing.	Metal Finishing, Part 433	1	Yes	No	MF00214A2

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1080.3	CBI_Chemical Processing Flow Charts for Pilkington Metal Finishing - DCN MF00214A3CBI	CBI_Contains process flows for all three buildings at Pilkington Metal Finishing. The process flows are organized by anodizing/conversion coating, electropolishing, passivating, acid cleaning, degreasing, paint stripping, and deoxidizing.	Data	Pilkington	07/13/2016	Pilkington. 2016. Chemical Processing Flow Charts for Pilkington Metal Finishing.	Metal Finishing, Part 433	1	Yes	No	MF00214A3
10.31	EPA-HQ-OW-2015-0665-1080.4	CBI_Chemical Processing Tank Contents for Pilkington Metal Finishing - DCN MF00214A4CBI	CBI_Provides the volume, solution identification, and solution name in each for the numbered tanks in the Building 1, 2, and 3 diagrams.	Data	Pilkington	07/13/2016	Pilkington. 2016. Chemical Processing Tank Contents for Pilkington Metal Finishing.	Metal Finishing, Part 433	2	Yes	No	MF00214A4
10.31	EPA-HQ-OW-2015-0665-1080.5	Chemical Flow Streams for Pilkington Metal Finishing - DCN MF00214A5	Contains waste process flow diagrams for life cycle of chemicals and waste.	Data	Pilkington	06/21/2012	Pilkington. 2012. Chemical Flow Streams for Pilkington Metal Finishing.	Metal Finishing, Part 433	7	No	No	MF00214A5

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1081	CBI_Wastewater Treatment Process Flow Diagram for Building 1 & 2 at Pilkington Metal Finishing - DCN MF00215CBI	CBI_Provides a general flow diagram for the wastewater generated in Buildings 1 & 2. Provides treatment, sampling, disposal, and discharge information.	Data	Pilkington	07/13/2016	Pilkington. 2016. Wastewater Treatment Process Flow Diagram for Building 1 & 2 at Pilkington Metal Finishing.	Metal Finishing, Part 433	1	Yes	No	MF00215
10.31	EPA-HQ-OW-2015-0665-1081.1	CBI_Wastewater Treatment Process Flow Diagram for Building 3 at Pilkington Metal Finishing - DCN MF00215A1CBI	CBI_Contains wastewater treatment process flow diagram for the zero liquid discharge facility in Building 3.	Data	Pilkington	07/13/2016	Pilkington. 2016. Wastewater Treatment Process Flow Diagram for Building 2 at Pilkington Metal Finishing.	Metal Finishing, Part 433	1	Yes	No	MF00215A1
10.31	EPA-HQ-OW-2015-0665-1081.2	Wastewater Process Flow Diagram for Pilkington Metal Finishing - DCN MF00215A2	Pilkington wastewater treatment diagram with sample location and process tanks that flow into the wastewater treatment for buildings 1 & 2.	Data	Pilkington	07/12/2010	Pilkington. 2010. Wastewater Process Flow Diagram for Pilkington Metal Finishing.	Metal Finishing, Part 433	2	No	No	MF00215A2

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1082	Wastewater Discharge Permit Renewal for Pilkington Metal Finishing - DCN MF00216	Provides 2015 Wastewater Discharge Permit (SLC-0062) for Pilkington Metal Finishing	Permit, Registration	Salt Lake Water	08/24/2015	Salt Lake Water. 2015. Wastewater Discharge Permit Renewal for Pilkington Metal Finishing.	Metal Finishing, Part 433	42	No	No	MF00216
10.31	EPA-HQ-OW-2015-0665-1082.1	Wastewater Discharge Permit Application and Baseline Monitoring Report for Pilkington Metal Finishing - DCN MF00216A1	Contains Pilkington Metal Finishing's 2012 wastewater discharge permit and baseline monitoring report.	Permit, Registration	Salt Lake Water	07/20/2012	Salt Lake Water. 2012. Wastewater Discharge Permit Application and Baseline Monitoring Report for Pilkington Metal Finishing.	Metal Finishing, Part 433	72	No	No	MF00216A1
10.31	EPA-HQ-OW-2015-0665-1082.2	Annual Pretreatment Inspection for Pilkington Metal Finishing - DCN MF00216A2	Inspection report conducted at Pilkington Metal Finishing by Salt Lake City Water Reclamation Pretreatment Coordinator in 2015.	Permit, Registration	Salt Lake Water	03/23/2015	Salt Lake Water. 2015. Annual Pretreatment Inspection for Pilkington Metal Finishing.	Metal Finishing, Part 433	18	No	No	MF00216A2



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1082.3	Toxic Organic Management Plan (TOMP) for Pilkington Metal Finishing - DCN MF00216A3	Contains the Toxic Organic Management Plan (TOMP) in lieu of sampling for TTOs under 40 CFR 433 for Pilkington Metal Finishing	Permit, Registration	Pilkington	06/20/2011	Pilkington. 2011. Toxic Organic Management Plan (TOMP) for Pilkington Metal Finishing.	Metal Finishing, Part 433	24	No	No	MF00216A3
10.31	EPA-HQ-OW-2015-0665-1083	CBI_Email from Wayne VanTassell, Pilkington Metal Finishing Containing Information EPA Requested - DCN MF00217CBI	CBI_Email from Wayne VanTassell, Pilkington Metal Finishing, which provided SDSs, wastewater treatment diagrams, and metal finishing process flow diagrams.	Email	Pilkington	09/12/2016	Pilkington. 2016. Email from Wayne VanTassell, Pilkington Metal Finishing Containing Information EPA Requested.	Metal Finishing, Part 433	2	Yes	No	MF00217
10.31	EPA-HQ-OW-2015-0665-1083.1	CBI_Email Documenting CBI Claim and Email Deletion - DCN MF00217A1CBI	CBI_Email to document the deletion of retroactively claimed CBI items by Wayne VanTassell.	Email	Anna Dimling, ERG	06/15/2017	Dimling, A. 2017. Email Documenting CBI Claim and Email Deletion.	Metal Finishing, Part 433	3	Yes	No	MF00217A1

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1084	Sampling Results for Pilkington Metal Finishing - DCN MF00218	Contains sample concentrations from March 2008 through January 2016. Provides results from the following parameters: Cr, Cd, Cu, CN, Ni, Mo, Zn, Pb, Ag, pH, and flow (GPD).	Data	Pilkington	07/06/2016	Pilkington. 2016. Sampling Results for Pilkington Metal Finishing.	Metal Finishing, Part 433		No	No	MF00218
10.31	EPA-HQ-OW-2015-0665-1085	Wastewater Discharge Permit for OC Tanner Manufacturing Company - DCN MF00219	Provides 2016 Wastewater Discharge Permit (SLC-0077) for OC Tanner Manufacturing Company.	Permit, Registration	Salt Lake Water	01/27/2016	Salt Lake Water. 2016. Wastewater Discharge Permit for OC Tanner Manufacturing Company.	Metal Finishing, Part 433	70	No	No	MF00219
10.31	EPA-HQ-OW-2015-0665-1085.1	Wastewater Discharge Permit Application and Baseline Monitoring Report for OC Tanner Manufacturing Company - DCN MF00219A1	Contains the application for the wastewater discharge permit renewal	Permit, Registration	Salt Lake Water	09/10/2013	Salt Lake Water. 2013. Wastewater Discharge Permit Application and Baseline Monitoring Report for OC Tanner Manufacturing Company.	Metal Finishing, Part 433	91	No	No	MF00219A1

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1085.2	Annual Pretreatment Inspection for Production at OC Tanner Manufacturing - DCN MF00219A2	Inspection report conducted at OC Tanner Manufacturing Company (Production) by Salt Lake City Water Reclamation Pretreatment Coordinator in 2015.	Permit, Registration	Salt Lake Water	02/03/2015	Salt Lake Water. 2015. Annual Pretreatment Inspection for Production at OC Tanner Manufacturing.	Metal Finishing, Part 433	16	No	No	MF00219A2
10.31	EPA-HQ-OW-2015-0665-1085.3	Annual Pretreatment Inspection for Refinery at OC Tanner Manufacturing - DCN MF00219A3	Inspection report conducted at OC Tanner Manufacturing Company (Refinery) by Salt Lake City Water Reclamation Pretreatment Coordinator in 2015.	Permit, Registration	Salt Lake Water	02/03/2015	Salt Lake Water. 2015. Annual Pretreatment Inspection for Refinery at OC Tanner Manufacturing.	Metal Finishing, Part 433	19	No	No	MF00219A3
10.31	EPA-HQ-OW-2015-0665-1085.4	Toxic Organic Management Plan (TOMP) for OC Tanner Manufacturing Company - DCN MF00219A4	Contains the Toxic Organic Management Plan (TOMP) in lieu of sampling for TTOs under 40 CFR 433 for OC Tanner Manufacturing Company	Permit, Registration	OC Tanner	11/04/2011	OC Tanner. 2011. Toxic Organic Management Plan (TOMP) for OC Tanner Manufacturing Company.	Metal Finishing, Part 433	92	No	No	MF00219A4

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1086	CBI_Refinery Storage Maps for OC Tanner Manufacturing Company - DCN MF00220CBI	CBI_Provides storage information about materials in the refinery	Data	OC Tanner	12/31/2013	OC Tanner. 2013. CBI_Refinery Storage Maps for OC Tanner Manufacturing Company.	Metal Finishing, Part 433	3	Yes	No	MF00220
10.31	EPA-HQ-OW-2015-0665-1086.1	Email Providing Preliminary Refinery Steps for OC Tanner Manufacturing Company - DCN MF00220A1	Email from Annette Gertge, OC Tanner, to Andra explaining the refinery processes.	Email	O.C. Tanner	01/15/2015	O.C. Tanner. 2015. Email Providing Preliminary Refinery Steps for OC Tanner Manufacturing Company.	Metal Finishing, Part 433	4	No	No	MF00220A1
10.31	EPA-HQ-OW-2015-0665-1100	Sampling Results for OC Tanner Manufacturing Company - DCN MF00221	Contains sample concentrations from August 2008 through January 2016. Provides results from the following parameters: Cr, Cd, Cu, CN, Ni, Mo, Zn, Pb, Ag, pH, and flow (GPD).	Data	OC Tanner	07/05/2016	OC Tanner. 2016. Sampling Results for OC Tanner Manufacturing Company.	Metal Finishing, Part 433		No	No	MF00221

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1101	CBI_SDSs for OC Tanner Manufacturing Company - DCN MF00222CBI	CBI_Contains 3 SDSs for OC Tanner Manufacturing company.	Data	OC Tanner	07/05/2016	OC Tanner. 2016. CBI_SDSs for OC Tanner Manufacturing Company.	Metal Finishing, Part 433	18	Yes	No	MF00222
10.31	EPA-HQ-OW-2015-0665-1087	CBI_Email from Annette Gertge, OC Tanner Manufacturing Company Containing Information EPA Requested - DCN MF00223CBI	CBI_Delivery email from Annette Gerlge containing SDSs for chemicals used at OC Tanner Manufacturing Company	Email	O.C. Tanner	08/23/2016	O.C. Tanner. 2016. CBI_Email from Annette Gertge, OC Tanner Manufacturing Company Containing Information EPA Requested.	Metal Finishing, Part 433	2	Yes	No	MF00223
10.31	EPA-HQ-OW-2015-0665-1087.1	CBI_Email Documentation of CBI Email Claim and Removal - DCN MF00223A1CBI	CBI_Documentation email chain for CBI claim and email removal for retroactive CBI claims	Email	Anna Dimling, ERG	06/16/2017	ERG. 2017. CBI_Email Documentation of CBI Email Claim and Removal.	Metal Finishing, Part 433	3	Yes	No	MF00223A1

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1088	Wastewater Discharge Permit for Varian Medical Systems X-Ray Products - DCN MF00224	Provides 2015 Wastewater Discharge Permit (SLC-0058) for Varian Medical Systems X-Ray Products.	Permit, Registration	Salt Lake Water	11/02/2015	Salt Lake Water. 2015. Wastewater Discharge Permit for Varian Medical Systems X-Ray Products.	Metal Finishing, Part 433	54	No	No	MF00224
10.31	EPA-HQ-OW-2015-0665-1088.1	Industrial Wastewater Discharge Permit Application for Varian Medical Systems X-Ray Products - DCN MF00224A1	Industrial wastewater permit application for Varian Medical Systems X-Ray Products discharge permit (SLC-0058).	Permit, Registration	Salt Lake Water	03/30/2016	Salt Lake Water. 2016. Industrial Wastewater Discharge Permit Application for Varian Medical Systems X-Ray Products.	Metal Finishing, Part 433	74	No	No	MF00224A1
10.31	EPA-HQ-OW-2015-0665-1088.2	Analytical Lab Report for Varian Medical Systems X-Ray Products: Analytical Lab Report - DCN MF00224A2	Provides analytical lab report that was submitted by Varian Medical Systems X-Ray Products for their industrial wastewater permit application.	Data	Chemtech-Ford Lab	03/29/2016	Chemtech-Ford Lab. 2016. Analytical Lab Report for Varian Medical Systems X-Ray Products: Analytical Lab Report.	Metal Finishing, Part 433	37	No	No	MF00224A2

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1088.3	Annual Pretreatment Inspection Report for Varian Medical Systems X-Ray Products - DCN MF00224A3	Inspection report conducted at Varian Medical Systems X-Ray Products by Salt Lake City Water Reclamation Pretreatment Coordinator in 2015.	Permit, Registration	Salt Lake Water	07/06/2015	Salt Lake Water. 2015. Annual Pretreatment Inspection Report for Varian Medical Systems X-Ray Products.	Metal Finishing, Part 433	19	No	No	MF00224A3
10.31	EPA-HQ-OW-2015-0665-1089	Wastewater Treatment Flow Diagram for Varian Medical Systems X-Ray Products - DCN MF00225	Provides a wastewater treatment diagram for Varian Medical Systems X-Ray Products designating the difference between wastewater lines and sanitary sewer lines.	Data	Varian	05/08/2013	Varian. 2013. Wastewater Treatment Flow Diagram for Varian Medical Systems X-Ray Products.	Metal Finishing, Part 433	1	No	No	MF00225
10.31	EPA-HQ-OW-2015-0665-1089.1	Building Diagram for Varian Medical Systems X-Ray Products - DCN MF00225A1	Provides the layout of the Varian Medical Systems X-Ray Products facility and specifies the part of the building with metal finishing operations.	Data	Varian	05/08/2013	Varian. 2013. Building Diagram for Varian Medical Systems X-Ray Products.	Metal Finishing, Part 433	1	No	No	MF00225A1

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1089.2	Building Diagram with Legend for Varian Medical Systems X-Ray Products - DCN MF00225A2	Provides the layout of the Varian Medical Systems X-Ray Products facility and specifies sinks, water fountains, sub mercibel pump, manholes, and floor drains.	Data	Varian	05/02/2013	Varian. 2013. Building Diagram with Legend for Varian Medical Systems X-Ray Products.	Metal Finishing, Part 433	10	No	No	MF00225A2
10.31	EPA-HQ-OW-2015-0665-1089.3	CBI_Mass Flowchart for Varian-DCN MF00225A3CBI	CBI_Provides a full process flow diagram for the manufacturing of x-ray tubes from start to finish at Varian. Also specifies which operations generate wastewater and other wastes.	Data	Varian	07/18/2013	Varian. 2013. CBI_Mass Flowchart for Varian.	Metal Finishing, Part 433	1	Yes	No	MF00225A3
10.31	EPA-HQ-OW-2015-0665-1102	Chemical Information for Varian Medical Systems X-Ray Products - DCN MF00226	Provided chemical information (e.g., CAS number, hazards, inventory, storage locations) for chemicals used at Varian Medical Systems X-Ray Products.	Data	Varian	01/28/2016	Varian. 2016. Chemical Information for Varian Medical Systems X-Ray Products.	Metal Finishing, Part 433	178	No	No	MF00226



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1103	Sampling Results for Varian Medical Systems X-Ray Products - DCN MF00227	Contains sample concentrations from March 2008 through April 2016. Provides results from the following parameters: Cr, Cd, Cu, CN, Ni, Mo, Zn, Pb, Ag, pH, O&G and flow (GPD).	Data	Varian	06/28/2016	Varian. 2016. Sampling Results for Varian Medical Systems X-Ray Products.	Metal Finishing, Part 433		No	No	MF00227
10.31	EPA-HQ-OW-2015-0665-1104	Industrial Wastewater Discharge Permit for Plymouth Plating Works - DCN MF00228	Final Wastewater Discharge permit for Plymouth Plating Works, Inc. effective April 2013 to March 2017.	Permit, Registration	Detroit Water	04/17/2013	Detroit Water. 2013. Industrial Wastewater Discharge Permit for Plymouth Plating Works.	Metal Finishing, Part 433	46	No	No	MF00228
10.31	EPA-HQ-OW-2015-0665-1005	Plymouth Plating Diagrams - DCN MF00229	Contains process and wastewater treatment diagrams for Plymouth Plating Works, Inc.	Data	Plymouth Plating	10/28/2010	Plymouth Plating. 2010. Plymouth Plating Diagrams.	Metal Finishing, Part 433	7	No	No	MF00229

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1006	Industrial Wastewater Discharge Permit for KC Jones Plating Co. - DCN MF00230	Final Industrial Wastewater Discharge Permit for KC Jones Plating Co., effective March 2, 2015 to March 1, 2019.	Permit, Registration	Detroit Water	02/27/2015	Detroit Water. 2015. Industrial Wastewater Discharge Permit for KC Jones Plating Co. .	Metal Finishing, Part 433	20	No	No	MF00230
10.31	EPA-HQ-OW-2015-0665-1007	CBI_KC Jones Process Line Diagrams - DCN MF00231	CBI_Contains six process line tank layout diagrams for KC Jones Plating Co.	Data	KC Jones	10/14/2005	KC Jones. 2005. CBI_KC Jones Process Line Diagrams.	Metal Finishing, Part 433	6	Yes	No	MF00231
10.31	EPA-HQ-OW-2015-0665-1008	KC Jones Wastewater Treatment System Flow Diagram - DCN MF00232	Contains a wastewater treatment flow diagram and costs associated with the treatment system at KC Jones.	Data	KC Jones	08/15/2016	KC Jones. 2016. KC Jones Wastewater Treatment System Flow Diagram.	Metal Finishing, Part 433	7	No	No	MF00232

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1009	Industrial Wastewater Discharge Permit for Ajax Metal Processing, Inc. - DCN MF00234	Final Industrial Wastewater Discharge Permit for Ajax Metal Processing, Inc., effective March 2, 2013 to March 1, 2017.	Permit, Registration	Detroit Water	03/01/2015	Detroit Water. 2015. Industrial Wastewater Discharge Permit for Ajax Metal Processing, Inc.	Metal Finishing, Part 433	13	No	No	MF00234
10.31	EPA-HQ-OW-2015-0665-1010	CBI_AJAX Metal Processing Process Flow Diagram - DCN MF00235	CBI_Process Flow Diagram for AJAX Metal Processing	Data	AJAX Metal Processing	08/03/2016	AJAX Metal Processing. 2016. CBI_AJAX Metal Processing Process Flow Diagram.	Metal Finishing, Part 433	1	Yes	No	MF00235
10.31	EPA-HQ-OW-2015-0665-1011	Industrial Wastewater Discharge Permit (Original) for Ford Flat Rock - DCN MF00236	Industrial Wastewater Discharge Permit for Ford Motor Company - Flat Rock Assembly Plant, effective 7/23/12 to 7/22/17. Was later modifies (see attachments).	Permit, Registration	South Huron Valley	07/20/2012	South Huron Valley. 2012. Industrial Wastewater Discharge Permit (Original) for Ford Flat Rock.	Metal Finishing, Part 433	17	No	No	MF00236

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1011.1	Industrial Wastewater Discharge Permit (Modified 8/28/12) for Ford Flat Rock - DCN MF00236.A1	Modified Industrial Wastewater Discharge Permit for Ford Motor Company - Flat Rock Assembly Plant, effective 9/01/12 to 7/22/17. Was later modifies (see A2).	Permit, Registration	South Huron Valley	08/28/2012	South Huron Valley. 2012. Industrial Wastewater Discharge Permit (Modified 8/28/12) for Ford Flat Rock.	Metal Finishing, Part 433	4	No	No	MF00236A1
10.31	EPA-HQ-OW-2015-0665-1011.2	Industrial Wastewater Discharge Permit (Modified 9/5/12) for Ford Flat Rock - DCN MF00236.A2	Modified Industrial Wastewater Discharge Permit for Ford Motor Company - Flat Rock Assembly Plant, effective 9/06/12 to 7/22/17.	Permit, Registration	South Huron Valley	09/05/2012	South Huron Valley. 2012. Industrial Wastewater Discharge Permit (Modified 9/5/12) for Ford Flat Rock.	Metal Finishing, Part 433	2	No	No	MF00236A2
10.31	EPA-HQ-OW-2015-0665-1012	Ford Flat Rock Pre-treat/Phosphate Diagram - DCN MF00237	Flow diagram the Pre-treat/Phosphate System at Ford Flat Rock	Data	Ford Flat Rock	08/16/2016	Ford Flat Rock. 2016. Ford Flat Rock Pre-treat/Phosphate Diagram.	Metal Finishing, Part 433	1	No	No	MF00237

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1013	Ford Flat Rock Wastewater Treatment Plant Diagram - DCN MF00238	Screenshot of wastewater treatment plant operating system. Includes schematic of treatment process.	Data	Ford Flat Rock	08/17/2016	Ford Flat Rock. 2016. Ford Flat Rock Wastewater Treatment Plant Diagram.	Metal Finishing, Part 433	1	No	No	MF00238
10.31	EPA-HQ-OW-2015-0665-1014	CBI_Wastewater Treatment Plant Invoice for Ford Flat Rock - DCN MF00239CBI	CBI_Contains operating costs for the wastewater treatment plant at Ford Flat Rock for the month of July, 2016.	Data	Ford Flat Rock	08/01/2016	Ford Flat Rock. 2016. CBI_Wastewater Treatment Plant Invoice for Ford Flat Rock.	Metal Finishing, Part 433	1	Yes	No	MF00239
10.31	EPA-HQ-OW-2015-0665-1015	Plating/Passivation Diagram for Elm Plating - DCN MF00240	Plating/Passivation process line diagram for Elm Plating	Data	Elm Plating	08/17/2016	Elm Plating. 2016. Plating/Passivation Diagram for Elm Plating.	Metal Finishing, Part 433	1	No	No	MF00240

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1016	Wastewater Treatment Plant Process Diagram for Elm Plating - DCN MF00241	Wastewater treatment process flow diagram for Elm Plating	Data	Elm Plating	08/17/2016	Elm Plating. 2016. Wastewater Treatment Plant Process Diagram for Elm Plating.	Metal Finishing, Part 433	1	No	No	MF00241
10.31	EPA-HQ-OW-2015-0665-1017	Elm Plating Facility Schematic - DCN MF00242	Facility Schematic for Elm Plating	Data	Elm Plating	08/17/2016	Elm Plating. 2016. Elm Plating Facility Schematic.	Metal Finishing, Part 433	1	No	No	MF00242
10.31	EPA-HQ-OW-2015-0665-1018	Elm Plating SVR CBI Claims - DCN MF00243	Email from Allen Kinsler, Elm Plating containing CBI claims for the Site Visit Report for EPA and ERG's visit to the facility on August 17, 2016 and addition information provided to EPA and ERG by the facility.	Email	Elm Plating	04/24/2017	Elm Plating. 2017. Elm Plating SVR CBI Claims.	Metal Finishing, Part 433	2	No	No	MF00243

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1019	Powder Coating Line Diagram for Methode Electronics - DCN MF00244	Powder Coating Line Flow Diagram for Methode Electronics	Data	Methode Electronics	08/18/2016	Methode Electronics. 2016. Powder Coating Line Diagram for Methode Electronics.	Metal Finishing, Part 433	1	No	No	MF00244
10.31	EPA-HQ-OW-2015-0665-1020	Wastewater Pretreatment Flow Diagram for Plating Lines/Deburring at Methode Electronics - DCN MF00245	Wastewater treatment flow diagram of the pretreatment for plating lines/deburring wastewater at Methode Electronics	Data	Methode Electronics	08/18/2016	Methode Electronics. 2016. Wastewater Pretreatment Flow Diagram for Plating Lines/Deburring at Methode Electronics.	Metal Finishing, Part 433	1	No	No	MF00245
10.31	EPA-HQ-OW-2015-0665-1021	Facility Maps for Eagle Electronics - DCN MF00246	Facility layout and process area maps for Eagle Electronics	Data	Eagle Electronics	08/18/2016	Eagle Electronics. 2016. Facility Maps for Eagle Electronics.	Metal Finishing, Part 433	2	No	No	MF00246

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1022	Metal Impact Facility and Wastewater Treatment Diagrams - DCN MF00247	Contains a wastewater treatment flow diagram and a facility layout diagram for Metal Impact.	Data	Metal Impact, LLC	08/19/2016	Metal Impact, LLC. 2016. Metal Impact Facility and Wastewater Treatment Diagrams.	Metal Finishing, Part 433	2	No	No	MF00247
10.31	EPA-HQ-OW-2015-0665-1023	Description of MIL Operations - DCN MF00248	Contains description of operations and includes water usage rates, wastewater treatment costs, discharge monitoring data, and a wastewater treatment system diagram.	Data	MIL	08/19/2016	MIL. 2016. Description of MIL Operations.	Metal Finishing, Part 433	4	No	No	MF00248
10.31	EPA-HQ-OW-2015-0665-1049	Facility Maps for Magnetic Inspection Laboratory - DCN MF00249	Contains a facility map for MIL and tank layouts for the north half and south half of the 1401 Greenleaf Ave. facility.	Data	MIL	08/19/2016	MIL. 2016. Facility Maps for Magnetic Inspection Laboratory.	Metal Finishing, Part 433	3	No	No	MF00249



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1050	Waste Treatment Without Wasted Space - DCN MF00250	Article published by Products Finishing (pfonlone.com). Article features the wastewater handling and waste treatment process systems at Magnetic Inspection Laboratory, Inc.	Data	Products Finishing	03/01/2010	Products Finishing. 2010. Waste Treatment Without Wasted Space.	Metal Finishing, Part 433	4	No	Yes	MF00250
10.31	EPA-HQ-OW-2015-0665-0800	Electronic Waste Recycling Act of 2003 - DCN MF00251	Provides a summary of the California enacted the Electronic Waste Recycling Act of 2003 and associated regulations to establish a funding system for the collection and recycling of certain electronic wastes.	Data	CalRecycle	04/09/2015	CalRecycle. 2017. California Environmental Protection Agency, Department of Resources Recycling and Recovery (CalRecycle). (September 5).	Metal Finishing, Part 433	1	No	No	MF00251
10.31	EPA-HQ-OW-2015-0665-0801	Understanding Reach - DCN MF00252	Contains a description of the regulation REACH in the European Union (EU).	Data	ECHA	12/29/2017	ECHA. 2017. European Union Chemicals Agency. (September 5).	Metal Finishing, Part 433	3	No	No	MF00252

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0812	Environmental Sustainability Resource Center (ESRC) - DCN MF00253	Description of EPA's Environmental Sustainability Resource Center (ESRC), that provides pollution prevention support for EPA region 3 and 4.	Data	ESRC	01/01/2017	ESRC. 2017. Environmental Sustainability Resource Center. Available online at: <a href="http://esrconline.org/">http://esrconline.org/</a> .	Metal Finishing, Part 433	1	No	No	MF00253
10.31	EPA-HQ-OW-2015-0665-0802	Great Lakes Regional Pollution Prevention Roundtable (GLRPPR): Promoting Prevention Through Information Exchange - DCN MF00254	Provides a summary of the Great Lakes Regional Pollution Prevention Roundtable (GLRPPR) Roundtable.	Data	GLRPPR	12/13/2017	GLRPPR. 2017. Promoting Pollution Prevention Through Information Exchange. Available online at: <a href="http://www.glrppr.org/">http://www.glrppr.org/</a> .	Metal Finishing, Part 433	3	No	No	MF00254
10.31	EPA-HQ-OW-2015-0665-0803	Waste Minimalization and Recovery Technologies - DCN MF00255	Report on the surface finishing industry including waste production, waste recovery, bath regeneration, and wastewater treatment.	Data	W.J. McLeay	01/01/2001	McLay. 2001. Waste minimization and recovery technologies. Metal Finishing, 99 (1), January 2001, pp 808-841.	Metal Finishing, Part 433	28	No	No	MF00255

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0813	Quarterly Issue Highlights: REACH, Cd, Chromates - DCN MF00256	Quarterly report from the National Association for Surface Finishing (NASF)	Data	NASF	01/01/2012	NASF. 2012. National Association for Surface Finishing. Quarterly Issue Highlights: REACH, Cd, Chromates. (January).	Metal Finishing, Part 433	6	No	Yes	MF00256
10.31	EPA-HQ-OW-2015-0665-0814	Milwaukee Area Surface Finishing Industry Metal Loadings Study 2014-2016 - DCN MF00257	Report on a study conducted by the Milwaukee Metropolitan Sewerage District (MMSD).	Data	NASF	03/01/2017	NASF. 2017. National Association for Surface Finishing Milwaukee Area Surface Finishing Industry Metal Loadings Study.	Metal Finishing, Part 433	139	No	No	MF00257
10.31	EPA-HQ-OW-2015-0665-0815	P2 & Sustainability Program Webpage - DCN MF00258	Summary of the NEWMOA pollution prevention and sustainability program	Data	NEWMOA	03/01/2013	NEWMOA. 2013. Northeast States Pollution Prevention Roundtable. P2 and Sustainability Program Webpage.	Metal Finishing, Part 433	1	No	No	MF00258

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0816	Pollution Prevention Regional Information Center (P2RIC) Strategy - DCN MF00259	Summary of the Pollution Prevention Regional Information Center (P2RIC).	Data	P2RIC	07/09/1905	P2RIC. 2017. Pollution Prevention Regional Information Center. P2RIC Webpage Resources. Available online at: <a href="https://p2ric.org/">https://p2ric.org/</a> .	Metal Finishing, Part 433	3	No	No	MF00259
10.31	EPA-HQ-OW-2015-0665-0817	Peak to Prairies: Pollution Prevention Information Center for EPA Region 8 - DCN MF00260	Provides a summary of the Peaks and Prairies trade association.	Data	Peaks and Prairies	07/09/1905	Peak to Prairies. 2017. Pollution Prevention Information Center for EPA Region 8. Available online at: <a href="http://peaktoprairies.org/">http://peaktoprairies.org/</a> .	Metal Finishing, Part 433	5	No	No	MF00260
10.31	EPA-HQ-OW-2015-0665-0818	Pacific Northwest Pollution Prevention Resource Center - DCN MF00261	Summary of the Pacific Northwest Pollution Prevention Resource Center (pprc).	Data	PPRC	07/09/1905	PPRC. 2017. Pacific Northwest Pollution Prevention Resource Center. Available online at: <a href="http://pprc.org/">http://pprc.org/</a> .	Metal Finishing, Part 433	4	No	No	MF00261

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0819	Federal Register Notice for the Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards for the Metal Products and Machinery Point Source Category; Proposed Rule - DCN MF00262	FR Notice for the MP&M Proposed Rule.	Report	U.S. EPA	01/03/2001	U.S. EPA. 2001. FR Notice for the ELGs for the MP&M Point Source Category; Proposed Rule. Washington, D.C. (January 3).	Metal Finishing, Part 433	136	No	No	MF00262
10.31	EPA-HQ-OW-2015-0665-1051	Response to Comments for the Final Effluent Guidelines and Standards for the MP&M Point Source Category - DCN MF00263	Responses to comments for the final MP&M rulemaking.	Report	U.S. EPA	06/25/1905	U.S. EPA. 2003. Response to Comments for the Final Effluent Limitations Guidelines and Standards for the MP&M PSC. Washington, D.C. (February).	Metal Finishing, Part 433	454	No	No	MF00263
10.31	EPA-HQ-OW-2015-0665-0820	Federal Register Notice for the Effluent Limitations Guidelines and New Source Performance Standards for the Metal Products and Machinery Point Source Category; Final Rule - DCN MF00264	FR Notice for the MP&M Final Rule.	Report	U.S. EPA	05/13/2003	U.S. EPA. 2003. FR Notice for the ELGs for the MP&M Point Source Category; Final Rule. Washington, D.C. (May 13).	Metal Finishing, Part 433	61	No	No	MF00264

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0821	Fact Sheet: 2015 Definition of Solid Waste (DSW) Final Rule - DCN MF00265	Summary of the EPA's 2015 Definition of Solid Waste (DSW) final rule.	Data	U.S. EPA	07/07/1905	U.S. EPA. 2015. U.S. Environmental Protection Agency. Fact Sheet: 2015 Definition of Solid Waste (DSW) Final Rule. Washington D.C.	Metal Finishing, Part 433	4	No	No	MF00265
10.31	EPA-HQ-OW-2015-0665-0822	DMR Parameter and TRI Chemical Toxic Weighting Factors - DCN MF00266	DMR and TRI Toxic Weighting Factors (TWFs)	Data	U.S. EPA	09/01/2016	U.S. EPA. 2016. DMR Parameter and TRI Chemical Toxic Weighting Factors. Washington, D.C. (September).	Metal Finishing, Part 433	0	No	No	MF00266
10.31	EPA-HQ-OW-2015-0665-1105	Conversation with EPA Regional Pretreatment Coordinators on December 7, 2016 regarding the Metal Finishing Study - DCN MF00267	Notes from EPA's Meeting with Regional Pretreatment Coordinators on December 7, 2016 regarding the Metal Finishing Study.	Memorandum	U.S. EPA	04/10/2018	U.S. EPA. 2018. Conversation with EPA Regional Pretreatment Coordinators regarding the Metal Finishing Study.	Metal Finishing, Part 433	3	No	No	MF00267

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-1106	Conversations with NASF regarding the Metal Finishing Study - DCN MF00268	Notes from EPA's Meetings with NASF on April 20, 2016 and April 27, 2017 regarding the Metal Finishing Study. Includes a brief summary of the 2016 NASF SUR/FIN Conference in Las Vegas, Nevada.	Memorandum	U.S. EPA	03/12/2018	U.S. EPA. 2018. Conversations with NASF regarding the Metal Finishing Study.	Metal Finishing, Part 433	5	No	No	MF00268
10.31	EPA-HQ-OW-2015-0665-1052	Pollution Prevention Research and Implementation for Michigan Metal Finishers Project Kickoff Meeting Summary - DCN MF00269	Notes from the P2 Kickoff Meeting for Michigan Metal Finishers in November 2016.	Memorandum	U.S. EPA	11/29/2016	U.S. EPA. 2016. P2 Research and Implementation for Michigan MFs Project Kickoff Meeting Summary. Washington, D.C. (November).	Metal Finishing, Part 433	8	No	No	MF00269
10.31	EPA-HQ-OW-2015-0665-1107	Conversations with NACWA on March 8, 2016 regarding the Metal Finishing Study - DCN MF00270	Notes from EPA's Meeting with NACWA on March 8, 2016 regarding the Metal Finishing Study.	Memorandum	U.S. EPA	03/14/2018	U.S. EPA. 2018. Conversations with NACWA on March 8, 2016 regarding the Metal Finishing Study.	Metal Finishing, Part 433	4	No	No	MF00270

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0823	Pollution Prevention (P2) and TRI - DCN MF00271	Provides the waste management hierarchy and summary of pollution prevention data with TRI data.	Data	U.S. EPA	08/15/2017	U.S. EPA. 2017. P2 and TRI Webpage. Accessed: August 15, 2017.	Metal Finishing, Part 433	3	No	No	MF00271
10.31	EPA-HQ-OW-2015-0665-0824	Pollution Prevention Information by Sector - DCN MF00272	Provides a summary of the Metal Finishing Pollution Prevention Resource List	Data	U.S. EPA	07/09/1905	WSPPN. 2017. Western Sustainability and Pollution Prevention Network. Pollution Prevention Information by Sector.	Metal Finishing, Part 433	5	No	No	MF00272
10.31	EPA-HQ-OW-2015-0665-0825	Zero Waste Network, Center for Environmental Excellence - DCN MF00273	Provides the homepage for the Zero Waste Network.	Data	ZWN	07/09/1905	ZWN. 2017. Zero Waste Network. Center for Environmental Excellence. Available online at: <a href="http://www.zerowastenetwork.org/">http://www.zerowastenetwork.org/</a> .	Metal Finishing, Part 433	2	No	No	MF00273



<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0826	A Review of Metal Precipitation Chemicals for Metal-Finishing Applications - DCN MF00274	Report summarizing the chemicals used to precipitate out metals in metal finishing operations.	Data	Mark E. Andrus	11/01/2000	Andrus, M.E. 2000. A review of metal precipitation chemicals for metal-finishing applications. Metal Finishing, 98 (11), November 2000, pp 20-23.	Metal Finishing, Part 433	4	No	No	MF00274
10.31	EPA-HQ-OW-2015-0665-0827	Chromium-based regulations and greening in metal finishing industries in the USA - DCN MF00275	Paper reviewing the regulations, human health effects, and compliance options on metal finishing products containing chromium.	Data	Anil Baral, et. Al.	06/24/1905	Baral and Engelken. 2002. Chromium-based regulations and greening in MF industries in the USA. Environmental Science & Policy, 5 (2), April 2002.	Metal Finishing, Part 433	13	No	Yes	MF00275
10.31	EPA-HQ-OW-2015-0665-0828	2010 Metal Finishing Workshop hosted by New York State Pollution Prevention Institute at Rochester Institute of Technology - DCN MF00276	Presentation by the New York State Pollution Prevention Institute (NYSP2i) discussing pollution prevention for metal finishing facilities.	Data	NYSP2i	03/04/2010	NYSP2i. 2010. Metal Finishing Workshop. (March 4).	Metal Finishing, Part 433	127	No	No	MF00276

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0829	2011 Metal Finishing Workshop hosted by New York State Pollution Prevention Institute at Rochester Institute of Technology - DCN MF00277	Presentation by the New York State Pollution Prevention Institute (NYSP2i) discussing pollution prevention for metal finishing facilities.	Data	NYSP2i	02/09/2011	NYSP2i. 2011. Metal Finishing Workshop. (Feb. 9).	Metal Finishing, Part 433	100	No	No	MF00277
10.31	EPA-HQ-OW-2015-0665-0830	Metal Finishing: How to Save on Alkaline Cleaners, Acids, and Rinse Water - DCN MF00278	Presentation by the New York State Pollution Prevention Institute (NYSP2i) discussing typical metal finishing process steps and optimized metal finishing operations (based on P2).	Data	Dave Fister	05/10/2011	NYSP2i. 2011. Metal Finishing: How to Save on Alkaline Cleaners, Acids, and Rinse Water. Presented by Dave Fister. (May 10).	Metal Finishing, Part 433	46	No	No	MF00278
10.31	EPA-HQ-OW-2015-0665-0831	Metal Finishing Webinar presented by The New York State Pollution Prevention Institute P2 Webinar (NYSP2i) and the Toxic Use Reduction Institute (TUTI) - DCN MF00279	Webinar by the New York State Pollution Prevention Institute and Toxic Use Reduction Institute on Metal Finishing.	Data	NYSP2i	01/01/2014	NYSP2i. 2014. Metal Finishing Webinar presented by NYSP2i and the Toxic Use Reduction Institute (TUTI).	Metal Finishing, Part 433	0	No	No	MF00279

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0832	Pollution prevention in a zinc die casting company: a 10-year case study - DCN MF00280	Paper summarizing the pollution prevention methodologies applied to mass finishing processes for cleaning and polishing of miniature zinc die-casts.	Data	Park, et al.	09/12/2000	Park, et al. 2002. Pollution prevention in a zinc die casting company: a 10-year case study. Journal of Cleaner Production.	Metal Finishing, Part 433	7	No	Yes	MF00280
10.31	EPA-HQ-OW-2015-0665-0833	A Feasibility Study of Ultrafiltration/Reverse Osmosis (UF/RO)-based Wastewater Treatment and Reuse in the Metal Finishing Industry - DCN MF00281	Paper discussion applying ultrafiltration and reverse osmosis wastewater treatment technologies to metal finishing facilities.	Data	Petricin, et al.	04/07/2015	Petricin, et al. 2015. A feasibility study of UF/RO-based wastewater treatment and reuse in the MF industry.	Metal Finishing, Part 433	9	No	Yes	MF00281
10.31	EPA-HQ-OW-2015-0665-0834	Ferrate(VI) and ferrate(V) oxidation of cyanide, thiocyanate, and copper(I) cyanide - DCN MF00282	Paper discussing the common constituents associated with metal finishing and gold mining processes and their treatment prior to discharge.	Data	Sharma, et al.	11/16/2007	Sharma, et al. 2008. Ferrate(VI) and ferrate(V) oxidation of cyanide, thiocyanate, and copper(I) cyanide.	Metal Finishing, Part 433	7	No	Yes	MF00282

<i>RECORD SECTION</i>	<i>EPA DOCUMENT ID</i>	<i>TITLE</i>	<i>ABSTRACT</i>	<i>DOCUMENT TYPE</i>	<i>AUTHOR</i>	<i>AUTHOR DATE</i>	<i>SOURCE CITATION</i>	<i>CATEGORY INDUSTRY</i>	<i>PAGE</i>	<i>CBI</i>	<i>COPY - RIGHTED</i>	<i>DCN</i>
10.31	EPA-HQ-OW-2015-0665-0835	U.S. EPA E3 Success Stories - DCN MF00283	EPA's website for E3 and Green Suppliers Network (GSN) success stories.	Data	U.S. EPA	08/15/2017	U.S. EPA. 2017. E3 Success Stories. Available online at: <a href="https://www.epa.gov/e3/e3-success-stories">https://www.epa.gov/e3/e3-success-stories</a> .	Metal Finishing, Part 433	4	No	No	MF00283
10.31	EPA-HQ-OW-2015-0665-0836	EPA Region 9, Metal Finishing Pollution Prevention Webpage - DCN MF00284	Metal finishing pollution prevention webpage for EPA Region 9.	Data	U.S. EPA	12/28/2017	U.S. EPA. 2017. EPA Region 9, MF P2 Webpage. Available online at: <a href="https://www3.epa.gov/region9/waste/p2/projects/metal.html">https://www3.epa.gov/region9/waste/p2/projects/metal.html</a> .	Metal Finishing, Part 433	2	No	No	MF00284
10.31	EPA-HQ-OW-2015-0665-0837	Technology Integration for Sustainable Manufacturing: An Applied Study on Integrated Profitable Pollution Prevention in Surface Finishing Systems - DCN MF00285	Paper discussing technological improvement in metal finishing operations which enables for money savings and pollution prevention achievements.	Data	Xiao, et. al.	08/09/2012	Xiao & Huang. 2012. Technology Integration for Sustainable Manufacturing: An Applied Study on Integrated Profitable P2 in Surface Finishing Systems.	Metal Finishing, Part 433	11	No	Yes	MF00285

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10.31	EPA-HQ-OW-2015-0665-0838	Ferrate(VI) oxidation of zinc-cyanide complex - DCN MF00286	Paper summarizing zinc-cyanide complexes found in gold mining effluents.	Data	Ria Yngard, et. Al.	05/09/2007	Yngard, R., Damrongsiri, S., Osathaphan, K., and V.K. Sharma. 2007. Ferrate(VI) oxidation of zinc-cyanide complex. Chemosphere, 69 (5).	Metal Finishing, Part 433	7	No	Yes	MF00286
10.31	EPA-HQ-OW-2015-0665-0839	Quality Assurance Activities for the Selection of Metal Finishing Sites and Existing Data Collection during Site Visits - Revision 1 - DCN MF00287	Memorandum describes quality assurance procedures ERG will use for the selection of metal finishing sites and existing data collection during site visits under the Metal Finishing Preliminary Study.	Memorandum	Dan-Tam Nguyen, ERG	02/01/2016	ERG. 2016. Memorandum to U.S. EPA from ERG. Re: QA for the Selection of the MF Sites and Existing Data Collection During Site Visits-Revision 1.	Metal Finishing, Part 433	10	No	No	MF00287
10.31	EPA-HQ-OW-2015-0665-0840	Never Deal with Spent Acid Solution Again - DCN MF00288	Website for PRO pHx Acid Life Extender (environmental friendly and sustainable acid solution)	Data	PRO-pHx	12/01/2017	PRO-pHx, 2017. "Never Deal with Spent Acid Solution Again". Available online at: <a href="http://www.pro-phx.com/index.htm">http://www.pro-phx.com/index.htm</a> .	Metal Finishing, Part 433	3	No	No	MF00288

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10.31	EPA-HQ-OW-2015-0665-0841	Clean Lines: Strategies for Reducing Your Environmental Footprint – Metal Finishing Operations - DCN MF00289	U.S. EPA fact sheet on strategies for reducing your environmental footprint related to metal finishing operations.	Data	U.S. EPA	11/01/2007	U.S. EPA, 2007. "Clean Lines: Strategies for Reducing Your Environmental Footprint – Metal Finishing Operations." (November).	Metal Finishing, Part 433	4	No	No	MF00289
10.31	EPA-HQ-OW-2015-0665-0842	Federal Register Notice: Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards for the Metal Products and Machinery Point Source Category; Notice of Data Availability; Proposed Rule - DCN MF00290	FR Notice for the MP&M NODA for the proposed rulemaking.	Data	U.S. EPA	06/05/2002	U.S. EPA. 2002. FR Notice: ELGs for the MP&M Point Source Category; Notice of Data Availability; Proposed Rule.	Metal Finishing, Part 433	58	No	No	MF00290
10.31	EPA-HQ-OW-2015-0665-0843	Additional DMR/TRI Analyses Spreadsheet Supporting the Metal Finishing Preliminary Study - April 2018 - DCN MF00291	Spreadsheet summarizing additional analyses conducted on the DMR/TRI data in April 2018.	Data	ERG	04/12/2018	ERG. 2018. Additional DMR/TRI Analyses Spreadsheet Supporting the Metal Finishing Preliminary Study - April 2018.	Metal Finishing, Part 433	0	No	No	MF00291

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10.31	EPA-HQ-OW-2015-0665-1024	Preliminary Review of the Metal Finishing Category - DCN MF00292	The report summarizes the analyses completed in 2016 and 2017 supporting the preliminary study of the Metal Finishing Category.	Publication USEPA	U.S. EPA	04/24/2018	U.S. EPA. 2018. Preliminary Review of the Metal Finishing Category. (April).	Metal Finishing, Part 433	68	No	No	MF00292
10.31	EPA-HQ-OW-2015-0665-1108	Economic Profile of the Metal Finishing Industry - DCN MF00293	The report summarizes the economic profile of the metal finishing industry supporting the preliminary study of the Metal Finishing Category.	Publication USEPA	U.S. EPA	04/26/2018	U.S. EPA. 2018. Economic Profile of the Metal Finishing Industry. (April).	Metal Finishing, Part 433	53	No	No	MF00293

**Attachment 3**

**DOCUMENTS CITED IN THE  
FINAL 2016 EFFLUENT GUIDELINES PROGRAM PLAN**



<b>DCN</b>	<b>Title</b>	<b>Docket/Document ID</b>
08412	Frequently Asked Questions and the National Pollutant Release Inventory (NPRI) - DCN 08412	EPA-HQ-OW-2015-0665-0404
08414	2014-2015 NPRI Substance List – DCN 08414	EPA-HQ-OW-2015-0665-0411
08415	Raw NPRI Data: Inventaire national des rejets de polluants 2013 / National Pollutant Release Inventory 2013 – DCN 08415	EPA-HQ-OW-2015-0665-0406
08416	Guide for Reporting to the National Pollutant Release Inventory 2014 and 2015 – DCN 08416	EPA-HQ-OW-2015-0665-0407
07754	Environmental Engineering Support for Clean Water Regulations Programmatic Quality Assurance Project Plan (PQAPP) – DCN 07754	EPA-HQ-OW-2010-0824-0229
00554	A Strategy for National Clean Water Industrial Regulations: Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards – DCN 00554	EPA-HQ-OW-2003-0074-0215
06557	Technical Support Document for the Annual Review of Existing Effluent Guidelines and Identification of Potential New Point Source Categories – DCN 06557	EPA-HQ-OW-2008-0517-0515
07755	U.S. EPA National Pollution Discharge Elimination System (NPDES) Permit Writers' Manual – DCN 07755	EPA-HQ-OW-2010-0824-0236
07756	Final 2012 and Preliminary 2014 Effluent Guidelines Program Plans – DCN 07756	EPA-HQ-OW-2014-0170-0002
08107	Final 2014 Effluent Guidelines Program Plan – DCN 08107	EPA-HQ-OW-2014-0170-0210
08520	Final NPDES Electronic Reporting Rule – DCN 08520	EPA-HQ-OW-2015-0665-0510
08418	2014 TRI Chemical List, Toxics Release Inventory Program – DCN 08418	EPA-HQ-OW-2015-0665-0409
08291	Changes To The TRI List Of Toxic Chemicals, Toxics Release Inventory Program – DCN 08291	EPA-HQ-OW-2015-0665-0251
08208	Preliminary 2016 Effluent Guidelines Program Plan – DCN 08208	EPA-HQ-OW-2015-0665-0290
08209	The 2015 Annual Effluent Guidelines Review Report – DCN 08209	EPA-HQ-OW-2015-0665-0299
08318	Effluent Guidelines Planning Review Report Supporting the Final 2016 Effluent Guidelines Program Plan – DCN 08318	EPA-HQ-OW-2015-0665-1056