

Blackmon, Amanda

From: Yates, Adam
Sent: Wednesday, May 9, 2018 2:21 PM
To: little rock jeff davis
Cc: Blackmon, Amanda; McWilliams, Carrie; Johnson, Miles; Allen-Daniel, Leslie
Subject: Little Rock Pretreatment Program Annual Report
Attachments: AR0021806_Little Rock Mar 2018 Pretreatment Program Annual Report_20180308.pdf

Jeff,

Little Rock Water Reclamation Authority's March 2018 Pretreatment Program Annual Report was received, reviewed, and deemed complete and compliant with the reporting requirements of 40 CFR 403.12(i). Thank you for your timely submittal and thorough report. If you have any questions or concerns, please feel free to contact me.

Kindly,

Adam Yates
State Pretreatment Coordinator
Office of Water Quality
Arkansas Department of Environmental Quality
Phone: (501) 682-0617
Fax: (501) 682-0880

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February 28, 2018

Director
Arkansas Department of Environmental Quality
NPDES Enforcement Section
5301 Northshore Drive
Little Rock, AR. 72118

RE: 2017 Annual Pretreatment Program Report
NPDES Permit AR0021806 – Adams Field Water Reclamation Facility
NPDES Permit AR0040177 – Fourche Creek Water Reclamation Facility
NPDES Permit AR0050849 – Little Maumelle Water Reclamation Facility

Gentlemen:

The purpose of this letter is to show compliance with the requirements found in General Pretreatment Regulations, 40 CFR 403.12(i), and the referenced NPDES permits issued to Little Rock Water Reclamation Authority(LRWRA). During 2017 LRWRA continued activities pursuant to maintaining compliance with the General Pretreatment Regulations. Enclosed with this letter is the 2017 Annual Pretreatment Program Report.

Contained within Section II of the enclosed report is a summary of the number of industrial users that have been in significant violation or significant noncompliance since 1986. During 2017, no industry was found to be in significant noncompliance with applicable pretreatment requirements in accordance to criteria published in 40 CFR 403 and EPA, Region VI, policy on quarterly reviews of industrial user compliance.

Also included in this report is an Updated Industrial User List and LRWRA's Pretreatment Program Status Report outlining compliance, sampling, and inspection information. The following abbreviations are used in the Pretreatment Program Status Report: C = compliance, NC = noncompliance, SNC = significant noncompliance, RD = received, and NR = not required. LRWRA is also enclosing information on 2017 sampling results for the three (3) Water Reclamation Facility's influent and effluent and biosolids as required by our NPDES permits.

If you have any questions concerning any of the information submitted, or require additional information, do not hesitate to contact Jeff Davis, Pretreatment Program Supervisor, at 688-1495, or me at 688-1429.

Sincerely,

LITTLE ROCK WATER RECLAMATION AUTHORITY


Signature


Date

Walter B. Collins, P.E.
Director of Operations
501-688-1429

cc: Greg Ramon, LRWRA CEO
Jean Block, LRWRA CLO
Walter Collins, Director of Operations
Susan Ledbetter, Interim Director of Environmental Assessment
Eric Wassell, Operations Superintendent
Jeff Davis, Pretreatment Program Supervisor
Jared Evanov, Interim Laboratory Supervisor
Mikel Murders, Plan Review/Environmental Sampling Supervisor



LITTLE ROCK
**Water Reclamation
Authority** ONE WATER.
ONE FUTURE.

ENVIRONMENTAL ASSESSMENT DEPARTMENT

2017 ANNUAL PRETREATMENT PROGRAM REPORT

Submitted February 28, 2018

**LITTLE ROCK WATER RECLAMATION AUTHORITY
2017 ANNUAL PRETREATMENT PROGRAM REPORT**

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**LITTLE ROCK WATER RECLAMATION AUTHORITY
ENVIRONMENTAL ASSESSMENT DEPARTMENT**

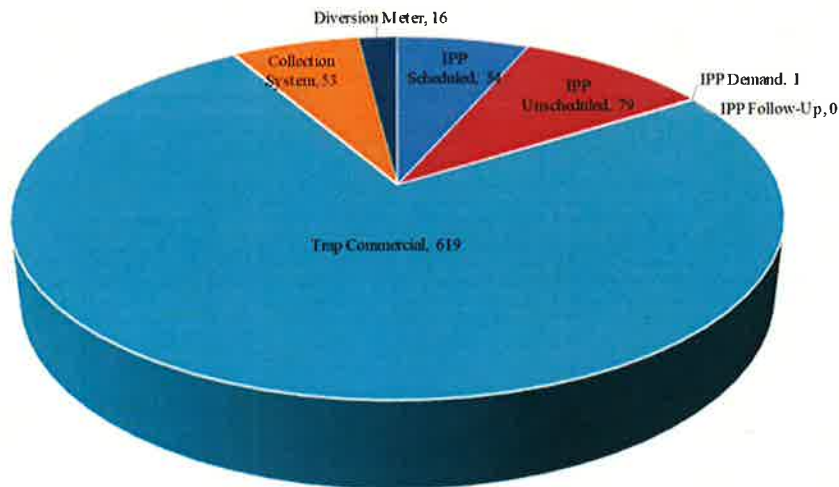
**Approved Pretreatment Program
2017 Accomplishments**

The Environmental Assessment Department (EAD) Approved Pretreatment Program conducts the requirements of the Code of Federal Regulations Title 40 Part 403(40 CFR 403) General Pretreatment Regulations. Objectives of 40 CFR 403 are to prevent the introduction of pollutants that may pass through or be incompatible with the Little Rock Water Reclamation Authority (LRWRA) Publicly Owned Treatment Works (POTW), prevent interference of treatment operations and sludge disposal, and to protect worker safety.

There were thirty-two (32) Significant Industrial Users (SIU), with active Industrial Wastewater Discharge Permits during 2017. Thirteen (13) of the thirty-two (32) are categorical; subject to federal pretreatment standards. There are an additional eighteen (18) Non-SIU facilities that also held Permits or Short-Term Authorizations for controlling and monitoring discharge requirements. These permits issued by LRWRA provide a control mechanism for sampling, inspecting, and tracking compliance with applicable Federal, State, and Local regulations.

A total of 822 inspections and investigations were conducted by the LRWRA Pretreatment Program Inspectors in 2018. For industries subject to permit requirements, 134 inspections were conducted to evaluate wastewater sources and compliance. EAD also performed 619 Trap/Interceptor Program inspections as measures to prevent discharge of prohibited solids, O&G and storm inflow resulting in approximately 140 corrective actions. EAD conducted 16 inspections of non-sewered flow credit diversion meters. EAD also conducted 180 collection system new connections and user investigations.

2017 INSPECTIONS



EAD was successful with addressing industry non-compliance and requiring necessary corrective measures to obtain a return to compliance. During 2017, eleven (11) Violation Reports were completed to track Industrial User (IU) numeric violations for a return to compliance.

Whole Effluent Toxicity (WET) tests were conducted on final effluents at Adams Field Water Reclamation Facility (AF-WRF), Fourche Creek (FC-WRF), and Little Maumelle (LM-WRF). No lethal or sub-lethal toxic effects were observed for facilities final effluents at any required NPDES effluent test dilutions.

The Pretreatment Program provides data to classify industrial users and which may generate revenue from the industrial user customers. Extra strength surcharges for COD, TS, TSS, and O&G loading to the collection system from industrial users, billed during the year, totaled approximately \$1,170,834. The City of Little Rock Water Reclamation Commission's adoption of the 2017 Consolidated Fee Schedule allowed EAD to administer fees totaling \$91,935 (permits/inspection fees, special discharge fees, Trap Control Program). Additionally, Landfill Leachate billing revenue was \$444,474. During 2017, LRWRA implemented and accomplished the following Pretreatment Program activities:

Program Development

- On March 31, 2017, the Annual Pretreatment Program Report for 2016 was completed, signed, and delivered to ADEQ as required by NPDES Permit. There were no industries in significant noncompliance in accordance to criteria published in the General Pretreatment Regulations (40 CFR 403). ADEQ responded July 13, 2017, that the report was reviewed, deemed complete and compliant with Federal Pretreatment Reporting Requirements for POTW's in 40 CFR 403.12(i).
- Adam Yates, Engineer, ADEQ NPDES Permits Section, informed LRWRA that he will be primary contact for any pretreatment-related issues. Annual Reports (Pretreatment Performance Summary) should still be sent to Adam Yates for review.
- Mercury Dental Rule 40 CFR 441 Effluent Limitation Guidelines final rule was published June 14, 2017. The purpose of the rule is to reduce mercury in wastewater from dental facilities. Rule oversight is based on POTW discretion (Section VI.D.4). There is no expected need for local or state law changes. All existing dental facilities will have 3 years to submit a One-Time Compliance Report (OTCR) to the control authority. Control authority (POTW) must receive and retain the OTCR in accordance to Pretreatment Regulation 40 CFR 403.12(o). The LRWRA pretreatment database showing approximately 200 active dentists in the city of Little Rock has been prepared based on a list previously provided by ADEQ. New dental facilities will have 90 days to submit report upon effective date of rule. Public Works has been notified to provide all remodels and new dental construction plans to LRWRA.
- AF-WRF NPDES Permit AR0021806 issued on November 2, 2017, to be effective January 1, 2018, requires LRWRA to provide written certification (within 60 days) that

a technical evaluation demonstrates local limits are adequate, or that revision to limits will be submitted within 12 months.

- LRWRA made staff changes in 2017 that affects the Pretreatment Program. FOG, Service line, diversion meter, and hauled liquid waste inspection activities, as well as 2 inspectors, have been moved from EAD to LRWRA Engineering Department. Remaining LRWRA Pretreatment staff will conduct the Approved Pretreatment Program procedures such as permitting, reporting requirements, high strength surcharge, and permitted industrial user inspections.
- Pretreatment Program Staff Training:
 1. LRWRA Pretreatment Program Supervisor and Director of Environmental Assessment attended EPA Region VI Pretreatment Workshop, August 2017.
 2. LRWRA Pretreatment staff attended the Annual AWW&WEA conference held in Hot Springs AR on May 1-2, 2017.
 3. LRWRA Pretreatment Inspectors attended annual 2017 Plumbing Inspectors Training Course, facilitated by the Arkansas Department of Health.
 4. Pretreatment Inspectors participated in Wastewater Innovation Network (WIN) teams during 2017. The teams are designed to enable employees to engage, assess, and enhance the daily workflow, communication and assets of LRWRA.
- POTW Biosolids were certified as Class A Exceptional Quality for the land application of 4,913 dry tons during 2017. (see Section VIII).

Industrial Relations

- In 2017, LRWRA mailed out thirty-six (36) Pretreatment Excellence Certificates Awards to permitted industries with perfect compliance for 2016.
- Special permitting activities in 2017 (new, modifications/extensions, and closures):
 1. Lost 40 Brewery permit was issued. This IU is subject to high strength surcharge provisions of the Little Rock Sewer Rate Ordinance.
 2. Arkansas Portable Toilets requested authorization for hauling liquid waste to AF-WWTP from Riverfest. A Restricted Short-Term Authorization (RSTA) was issued for Riverfest hauled liquid waste disposal to AF-WWTP.
 3. G&K Services, Division of Cintas, ceased laundry operations and closed the facility. A final inspection was conducted and closure letter of Industrial Wastewater Discharge Permit S-42 was mailed December 20, 2017 to Cintas Corporation contacts.
- In 2017, no industry was found to be in Significant Noncompliance in accordance to criteria published in the General Pretreatment Regulations 40 Code of Federal Regulations 403.8(f)(2)(viii).

- Compliance enforcement action requiring corrective measures and return to compliance monitoring was conducted for all numeric violations of permit effluent limits listed in the table below:

Reported Pretreatment Violations

Permitted Industrial User	Sample Date	Monitoring		Test Parameter	Reported Value	Violation of Limit
		LRW	Self			
Good Old Days Food	01/11/2017	X		pH	4.10 S.U.	≥ 5.0 - ≤ 12.0 S.U.
Little Rock Quick Rice(LRQR) process	2/12-18/2017	X		Flow	207,986 gpd weekly avg	200,000 gpd weekly avg
LRQR, total	2/20/2017	X		pH	4.59 S.U.	≥ 5.0 - ≤ 12.0 S.U.
Lost 40 Brewery	6/4/2017	X		pH	4.57 S.U.	≥ 5.0 - ≤ 12.0 S.U.
Lost 40 Brewery	6/26/2017	X		pH	4.53 S.U.	≥ 5.0 - ≤ 12.0 S.U.
LRQR, process	9/5/2017	X		pH	4.18 S.U.	≥ 5.0 - ≤ 12.0 S.U.
LRQR, process	11/15/2017	X		pH	4.53 S.U.	≥ 5.0 - ≤ 12.0 S.U.
Hormel Skippy Foods	12/5/2017	X		pH	4.93 S.U.	≥ 5.0 - ≤ 12.0 S.U.
LRQR, total	12/13/2017	X		pH	4.01 S.U.	≥ 5.0 - ≤ 12.0 S.U.
LRQR, total	12/14/2017	X		pH	4.34 S.U.	≥ 5.0 - ≤ 12.0 S.U.
LRQR, total	12/18/2017	X		pH	4.25 S.U.	≥ 5.0 - ≤ 12.0 S.U.
LRQR, process	12/21/2017	X		pH	3.35 S.U.	≥ 5.0 - ≤ 12.0 S.U.

1. Good Old Days Foods sampling by LRWRA, revealed a pH violation and a missing cap to the sampling point outfall on 1/11/2017. The IU was informed and discovered that the daily pH adjustment to the grease interceptor was not done as required. The grease interceptor was immediately neutralized, and a daily log check will continue to prevent reoccurrence. The missing cap was replaced the same day.
2. Little Rock Quick Rice (LRQR) showed non-compliance with permit weekly average flow limit for the week of 2/12-18/17. The industry was notified of the violation and responded that production has increase with four lines now operating. Production changes to reduce flow have been installed.
3. LRQR sampling by LRWRA revealed a pH violation on 2/20/17 at the total flow outfall (domestic and cleaning line). The industry was notified of the violations and has returned to compliance. The pH trend on the cleaning line outfall provided by LRQR does not show any low pH for that period and a cause could not be found.
4. Lost Forty Brewery sampling by LRWRA revealed pH violation on 6/4/17. The IU was contacted and required to provide corrective action. The IU was permitted as a Non-Significant Industrial User effective 6/16/17. Best management practices were implemented to prevent pH variability. IU returned to compliance.

5. Lost Forty Brewery sampling by LRWRA revealed a pH violation on 6/26/17. The IU advised that they are incorporating a new method of capturing waste beer but failed to neutralize it prior to discharging to the sewer. The IU returned to compliance.
6. LRQR sampling by LRWRA revealed a pH violation on 09/05/17 at the process outfall. The IU was notified and found that the caustic feed lines were in the wrong tanks. Two return-to-compliance pH sample events within permit limits were obtained.
7. LRQR sampling by LRWRA revealed a pH violation on 11/15/2017 at the process outfall. The IU was notified, and responds the low pH may have been caused by the soy sauce blancher as well as misplacement of pH probes. Two return-to-compliance pH sample events within permit limits were obtained.
8. Skippy Foods, LLC sampling by LRWRA revealed a pH violation on 12/5/2017. The IU was notified. The violation was caused by pump failure on the neutralization system. Two return-to-compliance pH sample events within permit limits were obtained.
9. LRQR sampling by LRWRA revealed a pH violation on at the total point on 12/13/17, 12/14/17 and 12/18/17. Notification was made to the IU for each occurrence. The IU initial investigation revealed the chemical pump wasn't working and the cleaning outfall pH probe was on the effluent side of the cleaning line holding tank rather than on the influent side. Maintenance moved the probe and repairs to the chemical pump and pumping cycle have been made. Also, IU calibration of the pH meters and chemical pumps were completed late 12/13//17; however, the calibration didn't hold based on review of the calibrations. The pumps and meters were again re-calibrated and appear to be running correctly.
10. LRQR sampling by LRWRA revealed a pH violation at the process outfall on 12/21/2017. The IU immediately turned off acid feed and corrected low pH. A Notice of Violation letter was mailed to the LRQR owner and requiring written response with corrective actions.

Inspection, Investigations, and IU Surveys

- Permitted IU investigations and actions implemented:
 1. Ameripride Services sampling by LRWRA revealed a O&G level of 1,423 mg/L on 6/22/2017. The 24-month average is 355 mg/L. Corporate environmental staff agreed to look at equipment inspection and other improvements to reduce future high O&G occurrences. The IU updated its maintenance schedule to reduce machinery leaks and to clean the pipes. Follow up sampling showed O&G at 11.4 mg/L.
 2. Baptist Health Medical Centers updated Spill and Control Plan was received from Harbor Environmental. The plan was reviewed and filed with LRWRA.
 3. Fiber Glass Systems, L.P. sampling by LRW showed an elevated oil & grease. Follow up inspection revealed the pretreatment influent box was full of hydraulic oil. Investigation revealed facility recently had a hydraulic oil leak. The IU was informed the discharge was prohibited. Discharge was terminated, and cleanup was conducted for three days. Sampling of the pretreatment plant outfall revealed a zinc

concentration of 8 mg/L. The Local Limit for zinc is 5 mg/L but applies at total point outfall. The total point outfall concurrent sampling event was lost due to sampler malfunction. LRWRA resample conducted 21 days later showed normal values at pretreatment (0.096mg/L) and the total point (0.25 mg/L). The IU contact proposed the possible source of the high zinc to be from a boiler cleanup and maintenance event.

4. Fourche Creek Water Reclamation Facility experienced short term high pH values at the influent headworks during 2017. Inspections and pH checks were conducted at probable sources based on pump station cycle information from Operations. No source was found as the elevated pH at the headworks diminished. Several facilities were surveyed but no cleaning with related wastewater discharges found.
5. G&K Services inspection revealed the industrial laundry service ceased operations. A closure inspection was completed. Permit closure letter was mailed to representatives.
6. Hiland Dairy and LRWRA continue to split samples for analysis of surcharge parameters. Discrepancies with comparability of data was resolved after the IU private lab submitted corrections to lab reports. The IU completed the newly added dock with crate washing operations. The IU is looking for alternative solutions to recycle some of the milk rinse water and milk solids.
7. I-30 Tank Wash inspection showed tanker wash water overflowing from the wash bay area into storm drainage. Pictures were provided to Nathan Charles, Public Works. The owner was informed the discharge is in violation of the Little Rock Storm Water Ordinance.
8. Little Rock Quick Rice(LRQR) wastewater loading variability to the FC-WRF headworks requires communication of LRQR production adjustments such as: (A) In February all wastewater was discharged to the process line outfall to reduce headworks loading until LRQR pit leaks were corrected. LRQR shut down production to complete corrective actions. (B) A major cleaning operation in April. To offset expect high end pH levels due to the cleaning products, a new pH neutralization system, new flow meter and piping were installed at the LRQR cleaning line outfall. (C) Process line outfall pH calibration problems in May. The IU installed a new pump/pH system. (D) July low flow to EQ basin was reported by FC-WRF. Subsequent investigation revealed LRQR conducted FDA mandated pest control (fogging) during the holiday break diminishing force main flow. Production was halted but no notification was made to FC-WRF of the 24-hour shutdown. It has been requested to LRQR to provide notice of any significant flow changes. (E) 80gpm centrifuge installed in July and 35gpm centrifuge installed in August. Systems put in test phase to re-circulate water back to production. (F) LRQR heat exchangers plugged, thus requiring a diversion of the process flow to the cleaning line to prevent the pit from overflow. During August site visit by LRWRA Director of EAD, LRQR agreed to install water level sensor and alarm to the pretreatment pit so that overflow to the cleaning line can be prevented or proper notification to LRWRA provided. (G) LRQR now operates 4 lines of production, two Sage V Frozen Rice (IQF), and two Best Rice Instant Rice (IR) lines. The IQF process uses less water than the IR process because it includes a steam cooker and

centrifuge. Plans are being made to replace IR soaker/blanchers with two steam cookers to further reduce water usage and solids.

9. Lost Forty Brewing, became a permitted IU subject to Rate Ordinance high strength surcharge provisions. LRWRA sampling confirmed COD levels of >4000 lbs per month. Lost 40 Brewery meeting was held to discuss process wastewater loading and forth coming high strength surcharge implications. The IU submitted a permit application and implemented BMPs to reduce the COD and TSS loading and neutralize pH. Industrial Wastewater Discharge Permit was issued.



10. Rhein Chemie Additives submitted a Baseline Monitoring Report for the intended bladder press pit wastewater discharge to the sanitary sewer. This flow is currently pumped to the evaporators. A Highland Tank Corella Coalesces separator (1,500 gallons) has been delivered to the plant and will be installed in 2018. Once the facility starts discharging from the separator, it will be subject to 40CFR438 Rubber Extrusion Pretreatment Standards for O&G (100 mg/L). Connection will require permit modification to no longer state zero discharge.
 11. Skippy Foods, LLC completed the installation of a chemical injection system (sodium hydroxide) that they are now using to neutralize the pH at the facility. This system was installed as corrective action to several pH violations in 2016.
 12. Welspun was contacted after LRWRA sampler was moved causing invalidation due to tampering. The IU responded that grounds maintenance workers on site may have moved the auto sampler and set it on the tubing during a work project. Corrective action to prevent reoccurrence was implemented.
- EAD completed source review material for the annual Industrial User (IU) Survey to evaluate industry sources for the 2017 Survey Program.
 1. Central Arkansas Membership Directory published by the Little Rock Chamber of Commerce
 2. Central Arkansas Water records
 3. The ADEQ Hazardous Waste Generators List October 2017
 4. Little Rock Manufacturers published by AEDC

5. Newspaper Articles
 6. New construction plans as routed by City Planning
 7. Telephone Directory
 8. Drive by of new and closed industry locations, multijurisdictional districts
 9. Survey data base
 10. Business license
- Inspections/evaluations for the 2017 Survey Screening Processes:
 1. Arkansas Cyclotron submitted construction plans for a new building being built next to Carti (9015 Carti Way). Plans were reviewed. The facility may qualify under Code of Federal Regulations Title 40 Part 439 subpart C: Chemical Synthesis. A requirement for submittal of a Baseline Monitoring Report was given along with Engineering comments forwarded to the Department of Planning Development with the City of Little Rock.
 2. Camino Real Food, 4701 Asher Avenue - This site was previously owned and operated by Odom's Tennessee Pride Sausage. The drive by revealed little to no activity at the plant. CAW records show a monthly water usage was 12CCF in 2017.
 3. Clean Uniform is a small laundry and dry-cleaning operation for work uniforms. It does not meet a Pretreatment Program permit class.
 4. Gesco site visit revealed no changes to the drum refurbishing process. Rinse water is recirculated or evaporated.
 5. LM Glassfiber Arkansas, 8000 Frazier Pike – a Wastewater Screening Form was received from HSE Manager. Site inspection was conducted. Wind mill blades are produced in a dry environment. There is apparently no connection to the sanitary sewer from production/storage areas. All chemicals are stored in 55-gallon or less drums within secondary containment. Chemical wastes are disposed by Safety Kleen.
 6. Oxford Graphics site visit conducted. The facility prints forms and cards. No changes since last inspection.
 7. Performance Food Service, 4901 Asher Avenue – PFG is a distributor in the restaurant business from fresh, frozen and dry food to food-related products such as cleaning supplies, packaging, equipment, supplies and serving ware. Wastewater flow from this facility is minimal.
 8. Pinnacle Aircraft Interior, 1400 E 28th St or 1805 E 22nd Street was investigated during IU survey. There does not seem to be any activity at this location.
 9. Ring Container survey inspection was conducted on December 11, 2017. Cooling water for molding is closed loop. The IU completed a request to provide spill control for water treatment chemicals.
 - LRWRA's Trap/Interceptor Program works to reduce the discharge of fats, oils, grease, and solids to the sanitary sewer. The types of facilities inspected perform food preparation and automotive maintenance. A summary of the activities performed for this program is included at the end of this section.

EAD conducted 619 inspections of some type of interceptor or trap. Of those inspections, 22% (140) corrective action items were required to clean or repair the interceptor or trap.

A total of 93 construction plans were reviewed with 69 plan approvals issued in 2017. EAD reviews all commercial construction plans for new facilities which may require a sand, grease, or lint interceptor.



PRETREATMENT PERFORMANCE SUMMARY (PPS)

NOTE: ALL QUESTIONS REFER TO THE INDUSTRIAL PRETREATMENT PROGRAM AS APPROVED BY THE EPA. THE PERMITTEE SHOULD NOT ANSWER THE QUESTIONS BASED ON CHANGES MADE TO THE APPROVED PROGRAM WITHOUT EPA AUTHORIZATION.

I. General Information			
Control Authority Name	<u>Little Rock Water Reclamation Authority</u>		
Address	<u>11 Clearwater Drive</u>		
City	<u>Little Rock</u>	State/Zip	<u>AR 72204</u>
Contact Person	<u>Jeff Davis</u>	Position	<u>Pretreatment Supervisor</u>
Contact Telephone	<u>(501) 688-1495</u>		
NPDES Permit No's.	<u>AR 0040177, AR 0021806, and AR 0050849</u>		
Reporting Period	<u>January 1, 2017 through December 31, 2017</u>		
Total Number of Categorical IUs	<u>13</u>		
Total Number of Significant Non-categorical IUs	<u>19</u>		

II. Significant Industrial User Compliance			
		Significant Industrial Users	
		Categorical	Noncategorical
1	No. of SIUs Submitting BMRs/Total No. Required	<u>0 / 0</u>	<u>0 / 0</u>
2	No. of SIUs Submitting 90-Day Compliance Reports/No. Required	<u>0 / 0</u>	<u>0 / 0</u>
3	No. of SIUs Submitting Semiannual Reports/Total No. Required	<u>5 / 5</u>	<u>0 / 0</u>
4	No. of SIUs Meeting Compliance Schedule/Total No. Required to Meet Schedule	<u>0 / 0</u>	<u>0 / 0</u>
5	No. of SIUs in Significant Noncompliance/Total No. of SIUs	<u>0 / 13</u>	<u>0 / 19</u>
6	Rate of Significant Noncompliance for all SIUs	<u>0 / 32</u>	

III. Compliance Monitoring Program			
		Significant Industrial Users	
		Categorical	Noncategorical
1	No. of Control Documents Issued or Renewed / Total Number Required 2017	<u>2 / 2</u>	<u>9 / 9</u>
2	No. of Non-sampling Inspections Conducted	<u>15</u>	<u>29</u>
3	No. of Sampling Visits Conducted	<u>104</u>	<u>518</u>
4	No. of Facilities Inspected (non-sampling)	<u>13</u>	<u>20</u>
5	No. of Facilities Sampled	<u>11*</u>	<u>19*</u>

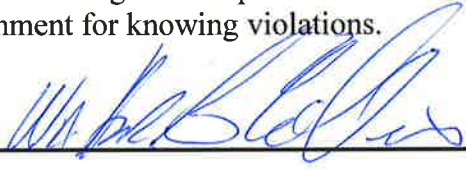
IV. Enforcement Actions			
		Significant Industrial Users	
		Categorical	Noncategorical
1	No. of Compliance Schedules Issued/No. of Schedules Required	<u>0 / 0</u>	<u>0 / 0</u>
2	No. of Notices of Violations issued to SIUs	<u>0</u>	<u>1</u>
3	No. of Administrative Orders Issued to SIUs	<u>0</u>	<u>0</u>
4	No. of Civil Suits Filed	<u>0</u>	<u>0</u>
5	No. of Criminal Suits Filed	<u>0</u>	<u>0</u>
6	No. of Significant Violators (attach newspaper publication)	<u>0</u>	<u>0</u>
7	Amount of Penalties Collected (total dollars/IUs assessed) **	<u>0 / 0</u>	<u>\$1,961 / 2</u>
8	Other Actions (sewer bans, etc.)	<u>0</u>	<u>0</u>

* Categorical SIU's: Four (4) sampled for regulated wastewater discharges: CertainTeed Corp., Interstate Highway Sign, Welspun Tubular, and Welspun HFW. Seven (7) sampled for unregulated wastewater only: Cameron V&M, Central Jet Flying Service, Dassault Falcon Jet, Hillcrest Camshaft, PPG Industries, Rhein Chemie Little Rock, and St. Vincent Hospital. Two (2) domestic wastewater discharge only - not sampled: ITW Global Tire Repair (Accessories Marketing) and Arkansas Painting and Specialty. Noncategorical SIU: One (1) no process discharge – Darling Ingredients.

** LRWRA Consolidate Fee Schedule allows for non-compliance fees based on sampling, testing and inspection costs.

The following certification must be signed in order for this form to be considered complete:

In accordance with the certification statement found in the NPDES Permits issued to Little Rock Water Reclamation Authority (Part II D. 11. c.): I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Authorized Representative

Date

Walter Collins, P.E. Director of Operations & Facilities

**LITTLE ROCK WASTEWATER
SUMMARY OF INDUSTRIAL USER NONCOMPLIANCE
1986 THROUGH 2017**

Year	Number of IUs In Significant Violation or Significant Noncompliance
1986	18 – Significant Violation
1987	9 – Significant Violation
1988	8 – Significant Violation
1989	4 – Significant Violation
1990	4 – Significant Noncompliance
1991	1 – Significant Noncompliance
1992	2 – Significant Noncompliance
1993	1 – Significant Noncompliance
1994	3 – Significant Noncompliance
1995	0 – Significant Noncompliance
1996	0 – Significant Noncompliance
1997	4 – Significant Noncompliance
1998	1 – Significant Noncompliance
1999	2 – Significant Noncompliance
2000	3 – Significant Noncompliance
2001	1 – Significant Noncompliance
2002	2 – Significant Noncompliance
2003	3 – Significant Noncompliance
2004	1 – Significant Noncompliance
2005	1 – Significant Noncompliance
2006	1 – Significant Noncompliance
2007	0 – Significant Noncompliance
2008	1 – Significant Noncompliance
2009	1 – Significant Noncompliance
2010 -2016	0 – Significant Noncompliance
2017	0 – Significant Noncompliance

**LITTLE ROCK WATER RECLAMATION AUTHORITY
2017 PRETREATMENT PROGRAM STATUS REPORT**

Facility Name	SIC	NAICS	Categorical Determination	Treatment Plant	Control Document		New User	Times Inspected	Times Sampled	Compliance Status				
					Last Action	Y/N				Reports				Effluent Limits
										BMR	90-Day Compliance	Semi-Annual	Self Monitoring	
Arkansas Painting and Specialities	3429	332510	40 CFR 433	Adams Field	RENEWED 01/01/2016	Y	N	1	0	RD 02/10/2006	RD*	RD	RD	NO 433 DISCHARGE
Cameron V&M	3491	332911	40 CFR 433	Fourche Creek	RENEWED 10/01/2016	Y	N	1	5	NR	RD*	NR	NR	C - NO 433 DISCHARGE
Central Flying Service, Little Rock	4581	488190	40 CFR 433	Adams Field	RENEWED 09/01/2016	Y	N	1	4	NR	NR	NR	NR	C - NO 433 DISCHARGE
CertainTeed Corporation	2952	324122	40 CFR 443	Adams Field	RENEWED 05/01/2016	Y	N	1	2	RD 04/14/2000	RD	RD	RD	C
Dassault Falcon Jet Corporation	3728	336413	40 CFR 433	Adams Field	RENEWED 12/01/2016	Y	N	1	7	RD 09/09/1990	RD*	NR	NR	NO 433 DISCHARGE
Hillcrest Camshaft Service, Inc.	3714	336310	40 CFR 433	Fourche Creek	RENEWED 10/01/2016	Y	N	1	8	RD 11/20/1995	RD*	NR	NR	C - NO 433 DISCHARGE
Interstate Highway Sign	3993	339950	40 CFR 433	Fourche Creek	RENEWED 02/01/2016	Y	N	2	15	RD 03/25/1992	RD	RD	RD	C
ITW Global Tire Repair	2869	325199	40 CFR 414	Fourche Creek	RENEWED 04/01/2016	Y	N	1	0	RD 03/12/2012	NR	NR	NR	NO 414 DISCHARGE
PPG Industries	2851	325510	40 CFR 446	Fourche Creek	RENEWED 07/01/2016	N	N	1	4	NR	NR	NR	NR	C - NO 446 DISCHARGE
Rhein Chemie Little Rock	3061	326291	40 CFR 428	Fourche Creek	RENEWED 01/01/2017	Y	N	1	2	NR	NR	NR	NR	C - NO 428 DISCHARGE
St. Vincent Hospital	8062 2834	622110 325412	40 CFR 439	Adams Field	RENEWED 03/01/2016	Y	N	1	8	RD 05/14/2004	RD*	NR	NR	C - NO 439 DISCHARGE
Welspun Tubular	3317	331210	40 CFR 433	Fourche Creek	RENEWED 06/01/2016	Y	N	1	24	RD 11/30/2007	RD	RD	RD	C
Welspun Tubular HFW	3317	331210	40 CFR 433	Fourche Creek	RENEWED 04/01/2017	Y	N	2	25	RD 01/17/2013	RD	RD	RD	C
Ameripride Services	7218	812332	N/A	Adams Field	RENEWED 1/01/2016	Y	N	1	12			BY POTW		C
Arkansas Children's Hospital	8062	622110	N/A	Adams Field	RENEWED 01/01/2014	Y	N	1	36			BY POTW		C
Arkansas Heart Hospital	8062	622110	N/A	Adams Field	RENEWED 02/01/2015	Y	N	1	8			BY POTW		C
Arkansas State Hospital	8063	622210	N/A	Adams Field	RENEWED 05/01/2017	Y	N	1	8			BY POTW		C
Baptist Health Laundry	7218	812332	N/A	Fourche Creek	RENEWED 06/01/2017	Y	N	1	4			BY POTW		C
Baptist Health Medical Center	8062	622110	N/A	Adams Field	RENEWED 07/01/2017	Y	N	1	22			BY POTW		C

Abbreviations: C = compliance, NC = noncompliance, SNC = significant noncompliance, RD = received, NR = not required, RD* = received prior to no discharge status.

**LITTLE ROCK WATER RECLAMATION AUTHORITY
2017 PRETREATMENT PROGRAM STATUS REPORT**

Facility Name	SIC	NAICS	Categorical Determination	Treatment Plant	Control Document		New User	Times Inspected	Times Sampled	Compliance Status				
					Last Action	Y/N				Reports				Effluent Limits
										BMR	90-Day Compliance	Semi-Annual	Self Monitoring	
Central AR Veterans Healthcare System	8062	622110	N/A	Adams Field	RENEWED 06/01/2014	Y	N	1	4			BY POTW		C
City of Little Rock Solid Waste	4953	562212	N/A	Fourche Creek	RENEWED 04/01/2016	Y	N	1	2			BY POTW		C
Darling Ingredients	2077 4214	311613 4844110	N/A	Fourche Creek	RENEWED 05/01/2016	Y	N	1	0			BY POTW		C-NO DISCHARGE
Fiber Glass Systems	3089	326122	N/A	Fourche Creek	RENEWED 12/10/2017	Y	N	1	12			BY POTW		C
G & K Services	7218	812332	N/A	Fourche Creek	CLOSED 12/22/2017	Y	Y	2	2			BY POTW		C
George Fischer Sloane	3084	326122	N/A	Fourche Creek	RENEWED 11/01/2016	Y	N	1	2			BY POTW		C
Hiland Dairy	2026	311511	N/A	Fourche Creek	RENEWED 10/01/2017	Y	N	1	24			BY POTW		C
Jack Wilson WTP	4941	221310	N/A	Adams Field	RENEWED 02/01/2016	Y	N	1	25			BY POTW		C
Little Rock Quick Rice	2038 2044	311212	N/A	Fourche Creek	RENEWED 10/23/2016	Y	N	9	322			BY POTW		NC - pH (7)
Ozark Point WTP	4941	221310	N/A	Adams Field	RENEWED 12/01/2017	Y	N	1	8			BY POTW		C
Porocel Corporation	2819	331311	N/A	Fourche Creek	RENEWED 07/01/2017	Y	N	1	8			BY POTW		C
Skippy Foods LLC	2099	311911	N/A	Fourche Creek	RENEWED 04/01/2017	Y	N	2	15			BY POTW		NC - pH (1)
Univ. of Ark. Medical Center	8062	622110	N/A	Adams Field	RENEWED 02/01/2017	Y	N	1	4			BY POTW		C

Abbreviations: C = compliance, NC = noncompliance, SNC = significant noncompliance, RD = received, NR = not required, RD* = received prior to no discharge status.

**Little Rock Water Reclamation Authority
2017 INDUSTRIAL USER LIST**

Number of Permitted IU's Classified as Federal Categorical	13
Number of Permitted IU's Classified as Significant Industrial Users	19
Number of Permitted IU's Classified as Non-Significant Industrial Users	13
Number of Special Permits for Landfill Leachate or RSTA	5
Total Number of IU's Permitted by LRWRA	50

Categorical Industries

Facility Name	Classification	Part	Manufacturing Process	Total Flow (gpd) average	Work Days/Month	Routine Pollutant Monitoring/Other
Arkansas Painting and Specialities	Categorical	433	Phosphate Coating	346	22	No 433 Discharge in 2016
Cameron V&M	Categorical	433	Steel Oil Field Valves	28,705	22	Zn, Pb, pH, Ni, Permit to discharge nonregulated wastewater
Central Flying Service - Little Rock	Categorical	433	Aircraft Refurbishing	303	30	pH, Permit to discharge nonregulated wastewater
CertainTeed Corporation	Categorical	443	Asphalt Rolled Roofing Production	26,962	26	TSS, O&G, pH
Dassault Falcon Jet Corporation	Categorical	433	Custom Jet Aircraft	17,478	22	COD, pH, Permit to discharge no-regulated wastewater only
Hillcrest Camshaft Service, Inc.	Categorical	433	Electroplating New Source	2,032	22	Cu, Cr, Pb, Ni, Zn, pH, Permit to discharge noregulated wastewater
Interstate Highway Sign	Categorical	433	Highway Signs	8,483	22	Cr, pH, Cu, Zn, Pb, Cd, Ni, Ag, CN, TTO
ITW Global Tire Repair	Categorical	414	Tire Sealant	3,063	22	Permit to discharge domestic wastewater only
PPG	Categorical	446	Paint and Coating	5,382	26	COD, pH, Permit to discharge domestic wastewater only
Rhein Chemie Little Rock	Categorical	428	Rubber Tire Curing Bladders	6,364	22	pH, Zn, Ni, Cu, O&G, Permit to discharge nonregulated wastewater
St. Vincent Hospital	Categorical	439	Hospital / PETNET	124,554	30	COD, pH, Hg, Zero discharge for 40 CFR 439.
Welspun Tubular	Categorical	433	Spiral Pipe and Coating	35,137	30	Zn, Cr, Pb, pH, Cd, CN, Ni, Cu, Ag, COD, TSS, O&G
Welspun Tubular HFW	Categorical	433	High Frequency Welding, Steel Pipe	48,472	30	Zn, Cr, Pb, pH, Cd, CN, Ni, Cu, Ag, TTO

Significant Non-Categorical Industries

Facility Name	Classification	Part	Manufacturing Process	Total Flow (gpd) average	Work Days/Month	Routine Pollutant Monitoring/Other
Ameripride Linen and Apparel	Significant		Laundry	57,732	22	COD, TSS, O&G, pH
Arkansas Children's Hospital	Significant		Hospital	93,841	30	East: COD, TSS, pH West: COD, TSS, O&G, pH South: COD, TSS, O&G, pH
Arkansas Heart Hospital	Significant		Hospital	35,611	30	COD, TSS, O&G, pH, Hg
Arkansas State Hospital	Significant		Hospital	14,530	30	COD, TSS, O&G, pH
Baptist Health Medical Center	Significant		Hospital	247,330	30	COD, TSS, O&G, pH, Hg
Hiland Dairy	Significant		Dairy Products, Juice, Tea	96,641	30	COD, TSS, O&G, pH
Fiber Glass Systems	Significant		Fiberglass reinforced epoxy and vinylester resin piping systems	11,922	22	As, Cd, Cu, Cr, Pb, Ni, Hg, Ag, Se, Zn, B, Mn, pH, CN, TTO
G & K Services	Significant		Laundry	25,782	30	COD, TSS, O&G, pH - closed 2017
George Fischer Sloane, Inc.	Significant		Plastic Molding	13,036	30	COD, TSS, O&G, pH
Darling Ingredients	Significant		Grease Recycling	0	22	COD, TSS, O&G, pH
Jack Wilson WTP	Significant		Water Treatment Plant	108,452	30	COD, TSS, pH
Baptist Health Laundry	Significant		Industrial Laundry	38,667	22	COD, TSS, O&G, pH
City of Little Rock Solid Waste	Significant		Municipal Landfill	28,590	26	COD, TSS, O&G, pH, NH3-N, As, Cd, Cu, Cr, Pb, Ni, Hg, Ag, Se, Zn, B, Mn, CN, volatiles, pesticides
Central AR Veterans Health Care	Significant		Hospital	149,303	30	COD, pH, Hg, Ag
Ozark Point WTP	Significant		Water Treatment Plant	39,954	30	COD, TSS, pH
Porocel Corporation	Significant		Mineral Milling	2,584	30	COD, TSS, pH, Zn, As, Cu, Cr, Ni, Hg
Little Rock Quick Rice	Significant		Rice Cooking	220,954	30	BOD, COD, TSS, O&G, TS, pH, Temperature
Skippy Foods LLC	Significant		Peanut Butter	24,630	22	COD, TSS, O&G, pH
University of Arkansas Medical Center	Significant		Hospital	133,154	30	COD, TSS, O&G, pH, Hg, Ag

Non-Significant Industries

Facility Name	Classification	Part	Manufacturing Process	Total Flow (gpd) average	Work Days/Month	Routine Pollutant Monitoring/Other
Arkansas Dust Control & Linen Service	Non-Significant		Industrial Laundry	4,397	22	COD, TSS, O&G, pH
BHMC-LR South Campus	Non-Significant		Hospital	11,582	30	COD, TSS, O&G, pH, Hg, Ag
BFI Landfill	Non-Significant		Landfill	13,053	30	COD, TSS, O7G, pH, NH3-N, As, Cd, Cu, Cr, Pb, Ni, Hg, Ag, Se, Zn, B, Mn, Ba, volatiles, pesticides
Clark Machinery	Non-Significant		Construction Equipment	1,073	22	COD, TSS, O&G, pH
Democrat Printing and Lithographing	Non-Significant		Printing Company	3,058	30	COD, TSS, O&G, pH
Dusty Mop and Mat Rentals	Non-Significant		Industrial Laundry	3,805	22	COD, TSS, O&G, pH
George Fischer Sloance, Inc.	Non-Significant		Plastic molding	13,036	30	COD, TSS, O&G, pH
Good Old Days Foods	Non-Significant		Frozen Fruit Cobbler	6,333	22	COD, TSS, O&G, pH
I-30 Tank Wash	Non-Significant		Truck Wash	742	22	COD, TSS, O&G, pH
Lost 40 Brewery	Non-Significant		Brewery	9,493	30	COD, TSS, O&G, pH
Martinous Oriental Rug Company	Non-Significant		Retail Rug Sales & Cleaning	108	22	pH
Phelps Fan	Non-Significant		Fan Manufacturer	5,400 / Batch	22	pH, Cr, Ni, Cu
Ryerson	Non-Significant		Metal Fabrication	974	30	pH, Cu, Zn

Restricted Short Term Authorizations and Landfill Leachate

Facility Name	Classification	Part	Manufacturing Process	Total Flow (gpd) average	Work Days/Month	Routine Pollutant Monitoring/Other
Arkansas Portable Toilets	RSTA		Portable	6,000 / Truck	N/A	Approved Domestic Only
IESI Cherokee Sanitary Landfill	Special Non-SIU		Landfill - HLW	6,000 / Truck	30	BOD, TSS, O&G, pH, NH3-N, As, Ba, B, Cd, Cr, Cu, Pb, Mn, Hg, Ni, Se, Ag, Zn, CN, Mo, volatiles, pesticides, TCLP
Jefferson County Landfill	Special Non-SIU		Landfill - HLW	6,000 / Truck	30	BOD, TSS, O&G, pH, NH3-N, As, Ba, B, Cd, Cr, Cu, Pb, Mn,
Jones & Sons Mobile Pressure Wash	RSTA		Pressure Washer	1,000 / Tank	N/A	Approved wash water only
Ozark Ridge Landfill	Special Non-SIU		Landfill - HLW	6,000 / Truck	30	BOD, TSS, O&G, pH, NH3-N, As, Ba, B, Cd, Cr, Cu, Pb, Mn, Hg, Ni, Se, Ag, Zn, CN, Mo, volatiles, pesticides, TCLP

SUMMARY OF ANALYTICAL RESULTS

ADAMS FIELD WATER RECLAMATION FACILITY (AF-WRF) INFLUENT AND EFFLUENT ANALYSES

Priority Pollutant Scans were conducted on the Little Rock Water Reclamation Facilities influent and effluent flows in accordance with NPDES permit requirements. Compounds analyzed include metals, cyanide, phenols, volatile organics, base/neutral and acid compounds, and pesticides/PCBs. Results of the analyses are organized in the following order:

- AF-WRF 2017 Sample Results - This information includes a summary page of influent and effluent required test data for parameters from 40 CFR Part 122, Appendix D, Table III reported in a format requested by ADEQ. The summary page is followed by separate influent and effluent data tables.

Sampling and testing frequency requirements for Table III parameters are quarterly (NPDES Permit AR 0021806 Part II). Influent and effluent samples were collected with respect to the detention time across the treatment plant for the sampling events. Table III parameters include total arsenic, cadmium, copper, chromium, lead, mercury, nickel, silver, selenium, zinc, antimony, thallium, beryllium, cyanide and phenols. Other parameters collected four per year include molybdenum and oil and grease.

- Treatment Plant Removal Efficiencies - This page includes the metals percent removal rates for AF-WRF. These removal rates are calculated based on the influent and effluent concentrations reported in the data table provided.
- AF-WRF 2017 Priority Pollutant Scan - Organic Fractions - This information includes required test data from 40 CFR Part 122, Appendix D, Table II divided into three parts. Item I: Identifies the positive measurements of organic compounds in the AF-WRF influent and effluent during 2017. Item II: Influent/Effluent organic fraction detections trend chart for 1991 through 2017. Item III is the long term summary of positive results. 40 CFR Part 122, Appendix D, Table II monitoring frequency for 2017 is once per year in accordance with the NPDES Permit 0021806.
- AF-WRF Plant Concentration Trends - This information includes graphs showing AF-WRF influent and effluent concentration trends for the past twenty-three years, 1994-2017. Some peaks may be due to changes in test methods and detection limits.

**MONITORING RESULTS FOR THE ANNUAL PRETREATMENT REPORT
REPORTING YEAR: JANUARY 1, 2017 TO DECEMBER 31, 2017**

TREATMENT PLANT: CITY OF LITTLE ROCK - ADAMS FIELD WATER RECLAMATION FACILITY

NPDES PERMIT NO.: AR0021806

AVERAGE POTW FLOW: 18.45 MGD

PERCENT (%) IU FLOW: 5.33 %

PLANT INFLUENT	Flow MGD	O&G µg/L	CN- µg/L	Zn µg/L	Cd µg/L	Cr µg/L	Ag µg/L	Cu µg/L	Mo µg/L	Ni µg/L	Pb µg/L	As µg/L	Se µg/L	Hg µg/L	Phenol µg/L	Sb µg/L	Be µg/L	Tl µg/L	Mn µg/L	Ba µg/L	B µg/L
EPA Test Method Used		1064 Rev.B 2010	SM 4300 C&E 2010/E-2011	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	1631E	420.1	200.8	200.8	200.8	200.7	200.7	200.7
Detection Level Achieved		5000	0.8/4.7	20	0.5	10	0.5	0.5	8/10	0.5	0.5	0.5	5	0.0902	2.2	60	0.5	0.5	2	2	100
01/17/2017	34.78			140	< 0.50	< 10	< 0.5	23.0	< 8	4.0	4.50	2.40	< 5			< 60	< 0.5	< 0.5			
02/10/2017	13.83	32000	< 0.8											0.1270	33.5						
04/17/2017	25.89			160	< 0.50	< 10	0.7	41.0	< 8	4.5	6.70	4.30	< 5			< 60	< 0.5	< 0.5			
06/01/2017	25.38	15000	< 0.8											0.0157	4.2						
07/10/2017	19.33			94	< 0.50	< 10	< 0.5	33.0	< 8	4.6	3.10	10.00	< 5			< 60	< 0.5	< 0.5	350	45	120
09/07/2017	13.44	24300	< 0.8											0.0823	22.4						
10/10/2017	13.43			160	< 0.50	< 10	1.5	45.0	< 10	4.7	5.50	6.90	< 5			< 60	< 0.5	< 0.5			
11/16/2017	13.03	96500	< 4.7											0.1440	20.6						
Average	19.89	41950	< 1.8	139	< 0.50	< 10	0.8	35.5	< 9	4.5	4.95	5.90	< 5	0.0923	20.2	< 60	< 0.5	< 0.5	350	45	120
Maximum	34.78	96500	< 4.7	160	< 0.50	< 10	1.5	45.0	< 10	4.7	6.70	10.00	< 5	0.1440	33.5	< 60	< 0.5	< 0.5	350	45	120
Minimum	13.03	15000	< 0.8	94	< 0.50	< 10	< 0.5	23.0	< 8	4.0	3.10	2.40	< 5	0.0157	4.2	< 60	< 0.5	< 0.5	350	45	120
Headworks limit			90.0	360	9.0	260.0	180.0	270		160	50	14	10	0.2							

Comments:

MONITORING RESULTS FOR THE ANNUAL PRETREATMENT REPORT
REPORTING YEAR: JANUARY 1, 2017 TO DECEMBER 31, 2017
CITY OF LITTLE ROCK - ADAMS FIELD WATER RECLAMATION FACILITY
NPDES PERMIT NO.: AR0021806

AVERAGE POTW FLOW: 18.45 MGD

PERCENT (%) IU FLOW: 5.33 %

METALS, CYANIDE and PHENOLS	MAHC (Total) (µg/l)	INFLUENT DATES SAMPLED (µg/l) Once/quarter				WQ level/limit (µg/l)	EFFLUENT DATES SAMPLED (µg/l) Once/quarter				LABORATORY ANALYSIS		
		Start Date	Start Date	Start Date	Start Date		Start Date	Start Date	Start Date	Start Date	EPA MQL (µg/l)	EPA Method Used	Detection Level Achieved (µg/l)
		1/17/2017	4/17/2017	7/10/2017	10/10/2017		1/17/2017	4/17/2017	7/10/2017	10/10/2017			
		<	<	<	<		<	<	<	<	<	<	
Antimony		< 60	< 60	< 60	< 60		< 60	< 60	< 60	< 60	60	200.8	60
Cadmium	9	< 0.5	< 0.5	< 0.5	< 0.5	54	< 0.5	< 0.5	< 0.5	< 0.5	0.5	200.8	0.5
Copper	270	23.0	41.0	33.0	45.0	214	4.2	8.4	5.7	6.1	0.5	200.8	0.5
Lead	50	4.5	6.7	3.1	5.5	198	< 0.5	0.5	< 0.5	< 0.5	0.5	200.8	0.5
Mercury	0.20	0.1270	0.0157	0.0823	0.1440	0.1	0.0081	0.0032	0.0051	0.0028	0.0002	1631E	0.0002
Nickel	160	4.0	4.5	4.6	4.7	4,990	2.4	2.8	4.1	2.7	0.5	200.8	0.5
Selenium	10	< 5	< 5	< 5	< 5	56	< 5	< 5	< 5	< 5	5	200.8	5
Silver	180	< 0.5	< 0.7	< 0.5	1.5	57	< 0.5	< 0.5	< 0.5	< 0.5	0.5	200.8	0.5
Zinc	360	140	160	94	160	1,700	25	47	26	28	20	200.8	20
Chromium	260	< 10	< 10	< 10	< 10	11,200	< 10	< 10	< 10	< 10	10	200.8	10
Cyanide	90	< 0.8	< 0.8	< 0.8	< 4.7	58	< 0.8	< 0.8	< 0.8	< 4.7	10	SM204500C&E-2011	0.8/4.7
Arsenic	14	2.4	4.3	10.0	6.9	2,380	1.30	1.10	2.10	2.00	0.5	200.8	0.5
Molybdenum		< 8	< 8	< 8	< 10		< 8	< 8	< 8	< 10	8	200.8	8/10
Phenols		33.5	4.2	22.4	20.6		10.2	2.2	9.4	6.5	2.2	420.1	2.2
Beryllium		< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	0.5	200.8	0.5
Thallium		< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	0.5	200.8	0.5
Barium				45					13		2	200.7	2
Boron				120					120		100	200.7	100
Manganese				350					63		2	200.7	2
Oil and Grease		32,000	15,000	24,300	96,500		< 5,000	< 5,000	< 5,000	9,000	5000	1664Rev.B-2010	5,000
Flow, MGD		34.78	25.89	19.33	13.43		29.11	22.86	18.52	12.97			

**MONITORING RESULTS FOR THE ANNUAL PRETREATMENT REPORT
REPORTING YEAR: JANUARY 1, 2017 TO DECEMBER 31, 2017**

TREATMENT PLANT: CITY OF LITTLE ROCK - ADAMS FIELD WATER RECLAMATION FACILITY

NPDES PERMIT NO.: AR0021806

AVERAGE POTW FLOW: 18.45 MGD

PERCENT (%) IU FLOW: 5.33 %

FINAL EFFLUENT	Flow MGD	O&G µg/L	CN- µg/L	Zn µg/L	Cd µg/L	Cr µg/L	Ag µg/L	Cu µg/L	Mo µg/L	Ni µg/L	Pb µg/L	As µg/L	Se µg/L	Hg µg/L	Phenol µg/L	Sb µg/L	Be µg/L	Tl µg/L	Mn µg/L	Ba µg/L	B µg/L	
EPA Test Method Used		1664 Rev.B 1999	SM 4500 C&E 2010/E-2011	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	1631E	420.1	200.8	200.8	200.8	200.8	200.8	200.8	200.8
Detection Level Achieved		5000	0.8/4.7	20	0.5	10	0.5	0.5	8/10	0.5	0.5	0.5	5	0.0002	2.2	60	0.5	0.5	2	2	100	
01/17/2017	29.11			25 <	0.50 <	10 <	0.5 <	4.2 <	8 <	2.4 <	0.50 <	1.30 <	5 <			< 60 <	0.5 <	0.5 <				
02/02/2017	14.38	< 5000	< 0.8											0.0081	10.2							
04/17/2017	22.86			47 <	0.50 <	10 <	0.5 <	8.4 <	8 <	2.8 <	0.53 <	1.10 <	5 <			< 60 <	0.5 <	0.5 <				
06/01/2017	20.93	< 5000	< 0.8											0.0032	< 2.2							
07/10/2017	18.52			26 <	0.50 <	10 <	0.5 <	5.7 <	8 <	4.1 <	0.50 <	2.10 <	5 <			< 60 <	0.5 <	0.5 <	63	13	120	
09/07/2017	12.91	< 5000	< 0.8											0.0051	9.4							
10/10/2017	12.97			28 <	0.50 <	10 <	0.5 <	6.1 <	10 <	2.7 <	0.50 <	2.00 <	5 <			< 60 <	0.5 <	0.5 <				
11/16/2017	12.33	9000	< 4.7											0.0028	6.5							
Average	18.00	6000	< 1.8	32 <	0.50 <	10 <	0.5 <	6.1 <	9 <	3.0 <	0.51 <	1.63 <	5 <	0.0048	7.1 <	< 60 <	0.5 <	0.5 <	63	13	120	
Maximum	29.11	9000	< 4.7	47 <	0.50 <	10 <	0.5 <	8.4 <	10 <	4.1 <	0.53 <	2.10 <	5 <	0.0081	10.2 <	< 60 <	0.5 <	0.5 <	63	13	120	
Minimum	12.33	< 5000	< 0.8	25 <	0.50 <	10 <	0.5 <	4.2 <	8 <	2.4 <	0.50 <	1.10 <	5 <	0.0028	< 2.2 <	< 60 <	0.5 <	0.5 <	63	13	120	
WQS Effluent Level																						
Day Max.			58.0	1700	54.0	11200.0	57.0	214		4990	198	2380	56	0.1								
Month Avg.			29.0	850	27.0	5590.0	28.0	106		2490	98	1190	28	0.07								

Comments:

**MONITORING RESULTS FOR THE ANNUAL PRETREATMENT REPORT
TREATMENT PLANT PERCENT REMOVAL EFFICIENCIES
REPORTING YEAR: JANUARY 1, 2017 TO DECEMBER 31, 2017**

Adams Field Water Reclamation Facility - NPDES Permit No. AR0021806

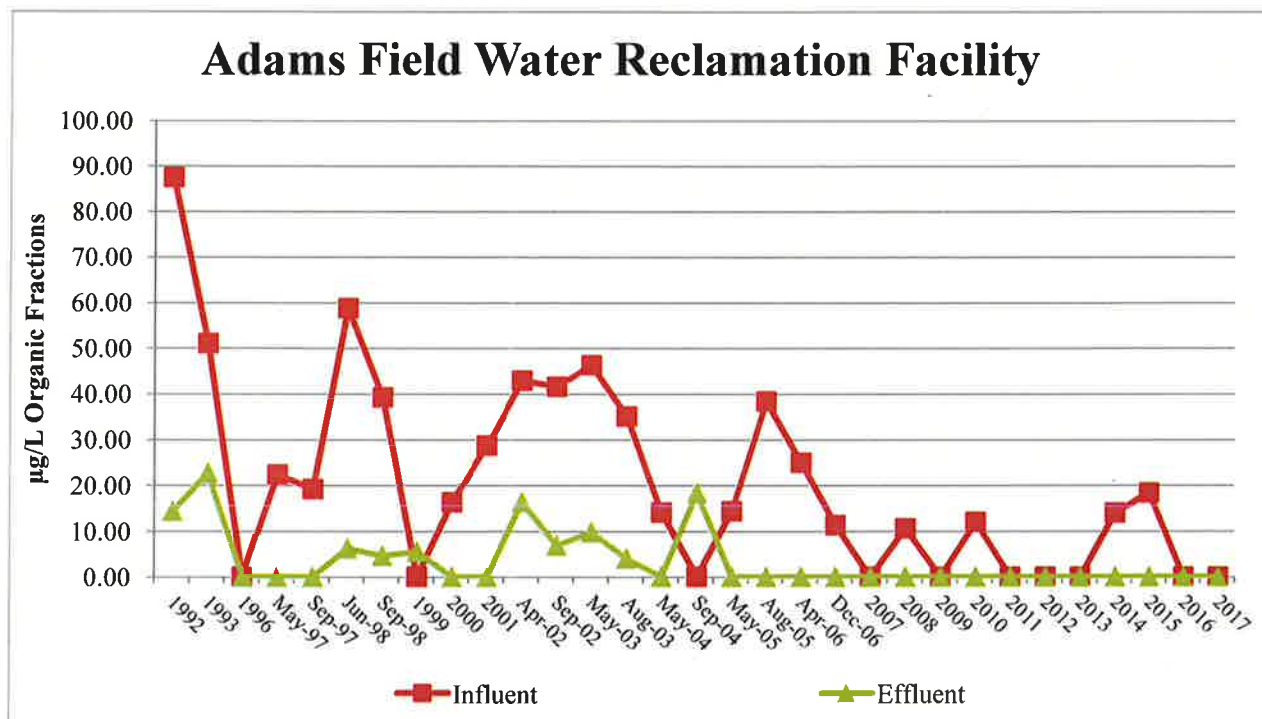
	O&G	CN-	Zn	Cd	Cr	Ag	Cu	Mo	Ni	Pb	As	Se	Hg	Phenol	Sb	Be	Tl	Mn	Ba	B
01/17/2017			82.1%	0.0%	0.0%	0.0%	81.7%	0.0%	40.0%	88.9%	45.8%	0.0%								
02/02/2017	84.4%	0.0%											93.6%	69.6%	0.0%	0.0%	0.0%			
04/17/2017			70.6%	0.0%	0.0%	26.5%	79.5%	0.0%	37.8%	92.1%	74.4%	0.0%			0.0%	0.0%	0.0%			
06/01/2017	66.7%	0.0%											79.4%	47.6%						
07/10/2017			72.3%	0.0%	0.0%	0.0%	82.7%	0.0%	10.9%	83.9%	79.0%	0.0%			0.0%	0.0%	0.0%	82.0%	71.1%	0.0%
09/07/2017	79.4%	0.0%											93.8%	58.0%						
10/10/2017			82.5%	0.0%	0.0%	66.7%	86.4%	0.0%	42.6%	90.9%	71.0%	0.0%			0.0%	0.0%	0.0%			
11/16/2017	90.7%	0.0%											98.1%	68.4%						
Average	80.3%	0.0%	76.9%	0.0%	0.0%	23.3%	82.6%	0.0%	32.8%	88.9%	67.6%	0.0%	91.2%	60.9%	0.0%	0.0%	0.0%	82.0%	71.1%	0.0%

I. 2017 INFLUENT / EFFLUENT POSITIVE RESULTS, µg/L

ADAMS FIELD WATER RECLAMATION FACILITY		
Sample Date	Compound	Influent
9/5/2017	Volatiles, Base/Neutral, Acid Compounds, Pesticides/PCBs, Chlorpyrifos	ND
Sample Date	Compound	Effluent
9/5/2017	Volatiles, Base/Neutral, Acid Compounds, Pesticides/PCBs, Chlorpyrifos	ND

Comments: ND - No Detection

II. TREND OF POSITIVE RESULTS - REPORTING PERIOD 1991 THROUGH 2017



III. SUMMARY OF INFLUENT / EFFLUENT POSITIVE RESULTS - REPORTING PERIOD 2016 - 2017

Adams Field Water Reclamation Facility

PPS, µg/L Parameter	2016		2017	
	INF	EFF	INF	EFF
Bis(2-ethylhexyl)Phthalate	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND
Tetrachlorethylene	ND	ND	ND	ND
Toulene	ND	ND	ND	ND
Gamma-BHC	ND	ND	ND	ND
Dieldrin	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND
Diethylphthalate	ND	ND	ND	ND
Dibutylphthalate	ND	ND	ND	ND
Di-n-butylphthalate	ND	ND	ND	ND
Butylbenzylphthalate	ND	ND	ND	ND
Phenol	ND	ND	ND	ND
Trichlorethene	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND
Dibenzo(a,h)anthracene	ND	ND	ND	ND
Total	0.0	0.0	0.0	0.0

Comments

III. SUMMARY OF INFLUENT / EFFLUENT POSITIVE RESULTS - REPORTING PERIOD 2008 THROUGH 2015

Adams Field Water Reclamation Facility

PPS, µg/L Parameter	2008		2009		2010		2011		2012		2013		2014		2015	
	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF
Bis(2-ethylhexyl)Phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14.0	ND	13.0	ND
Chloroform	10.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachlorethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toulene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibutylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	ND	ND	ND	ND	12.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.4	ND
Trichlorethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total	10.6	0.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0	0.0	18.4	0.0

Comments

III. SUMMARY OF INFLUENT / NEFFLUENT POSITIVE RESULTS - REPORTING PERIOD 2003 THROUGH 2007

Adams Field Water Reclamation Facility

PPS, µg/L Parameter	Aug-03		May-04		Sep-04		May-05		Aug-Oct-05 ¹		Apr-06		Oct-Dec-06 ²		2007 ³	
	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF
Bis(2-ethylhexyl)Phthalate	14.0	ND	ND	ND	ND	ND	14.3	ND	15.3	ND	13.5	ND	11.3	ND	ND	ND
Chloroform	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachlorethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toulene	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibutylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	ND	ND	14.0	18.3	ND	ND	ND	ND	ND	ND	11.4	ND	ND	ND	ND	ND
Butylbenzylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	23	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total	35.0	0.0	14.0	18.3	0.0	0.0	14.3	0.0	38.3	0.0	24.9	0.0	11.3	0.0	0.0	0.0

Comments

1. Grab samples for volatiles collected in August 2005; 24 hour composite samples (12/24 HFC) collected in October, 2005.
2. Influent 001P-015 24-HFC was invalid due to the wrong flows used to calculate the discrete volumes needed to prepare the composite sample.
3. NPDES permit effective January 1, 2007, monitoring frequency for toxic pollutants listed in 40 CFR 122 Appendix D Table II changed to at least once/year.

III. SUMMARY OF INFLUENT / EFFLUENT POSITIVE RESULTS - REPORTING PERIOD 1998 THROUGH 2003

Adams Field Water Reclamation Facility

PPS, µg/L Parameter	Jun-98		Sep-98		1999		2000		2001		Apr-02		Sep-02		May-03	
	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF ¹	EFF ¹
Bis(2-ethylhexyl)Phthalate	14.0	ND	12.0	3.1	ND	ND	ND	ND	17.5	ND	12.0	ND	12.0	3.6	15.0	ND
Chloroform	11.00	4.6	9.4	2.4	ND	ND	ND	ND	ND	ND	8.2	6.8	5.9	3.4	8.2	4
Tetrachlorethylene	8.80	ND	ND	ND	ND	ND	16.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toulene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	ND	ND	0.02	ND	ND	ND	ND	ND	ND	ND	0.018	0.013	ND	0.016	ND	0.021
Dieldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0045	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0063	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	8.4	ND	6.9	ND	ND	ND	ND	ND	ND	ND	7.1	ND	7.2	ND	6.2	ND
Dibutylphthalate	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	ND	ND	5.4	ND	ND	ND	ND	ND	11.1	16.3	5.0	ND	5.0	2.7	9.2	ND
Butylbenzylphthalate	4.4	ND	3.4	ND	ND	ND	ND	ND	ND	ND	5.3	ND	4.2	ND	4.6	ND
Phenol	4.5	ND	2.0	ND	ND	ND	ND	ND	ND	ND	5.2	ND	7.2	ND	3.0	ND
Trichlorethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total	58.70	4.60	39.12	5.50	0.00	0.00	16.20	0.0	28.60	16.30	42.82	6.82	41.50	9.72	46.2	4.02

Comments

1. May-2003 parameters were retested due to elevated detection limits for some parameters due to dilution factors used in laboratory.

III. SUMMARY OF INFLUENT / EFFLUENT POSITIVE RESULTS - REPORTING PERIOD 1991 THROUGH 1997

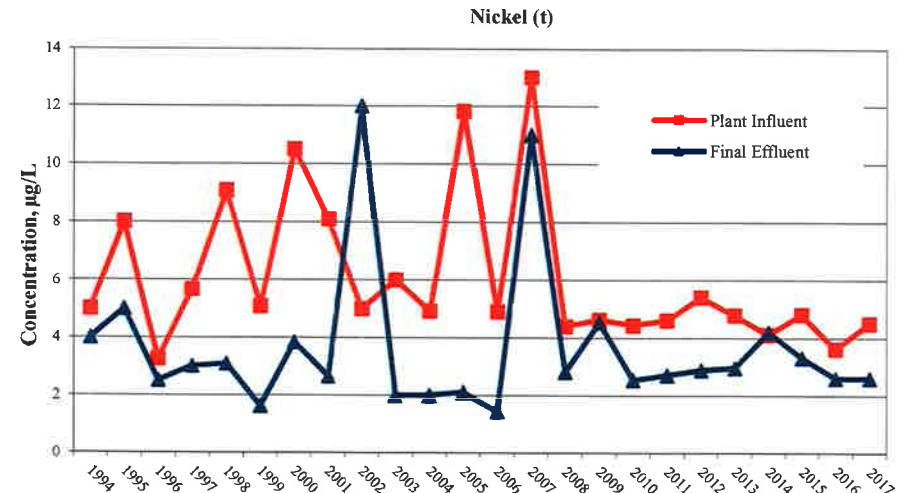
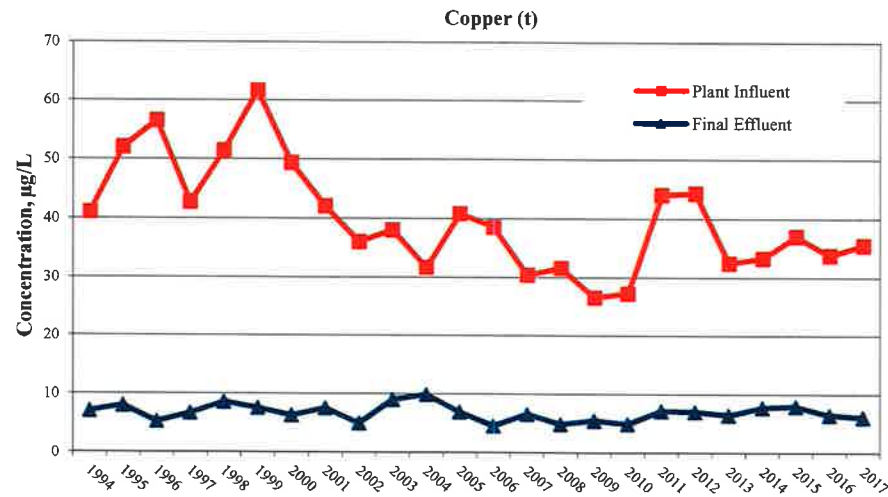
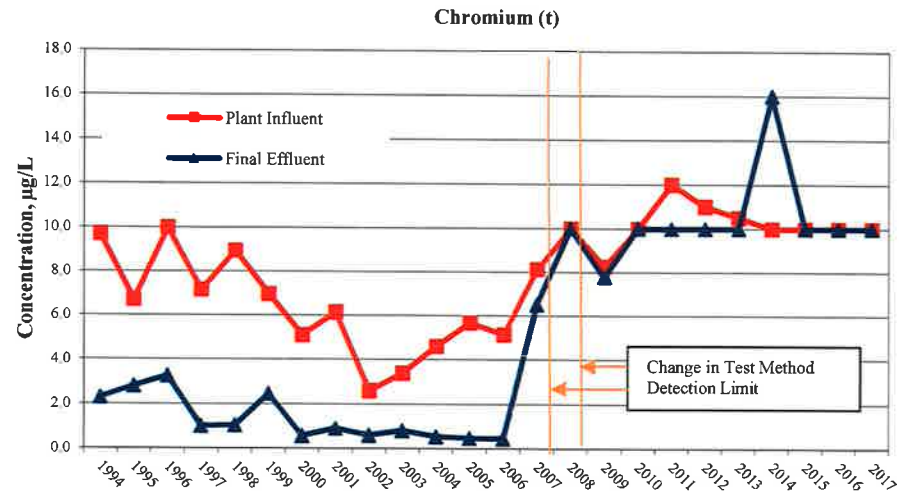
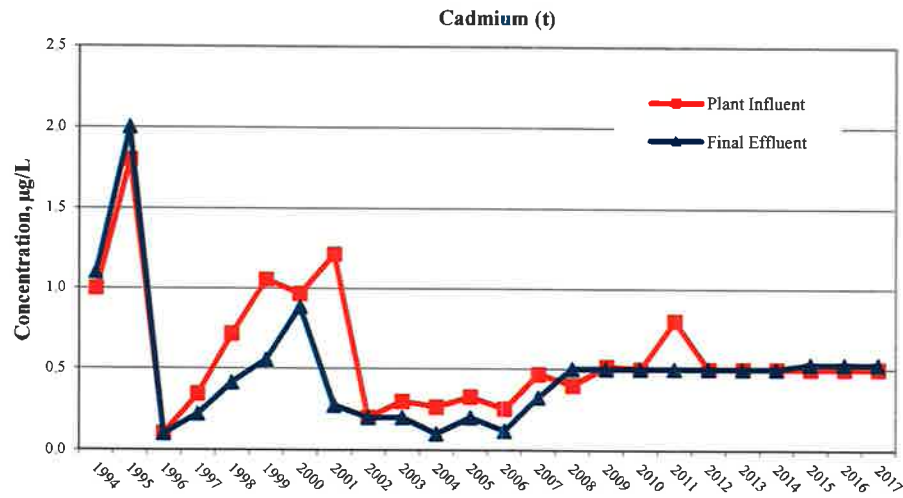
Adams Field Water Reclamation Facility

PPS, µg/L Parameter	1991		1992		1993		1994		1995		1996		May-97		Sep-97	
	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF
Bis(2-ethylhexyl)Phthalate	ND	4.20	82.0	5.30	24.0	ND	35.00	13.00	ND	3.7	ND	ND	ND	ND	11.8	6.22
Chloroform	14.00	10.00	5.40	5.30	ND	ND	3.70	3.60	12	6.4	ND	ND	10.40	ND	7.3	ND
Tetrachlorethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.90	ND	ND	ND
Toulene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	0.13	0.08	ND	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	16.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	ND	ND	ND	12.00	ND	ND	10.00	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibutylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorethene	ND	ND	ND	ND	27.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	29.00	ND	ND	ND	ND	ND	ND	ND
Total	30.13	14.28	87.4	22.62	51.0	0.0	48.70	16.60	41.00	10.10	0.00	0.00	22.30	0.00	19.10	6.22

Comments

**LITTLE ROCK WATER RECLAMATION AUTHORITY
 ENVIRONMENTAL ASSESSMENT DEPARTMENT
 ADAMS FIELD WATER RECLAMATION FACILITY CONCENTRATION TRENDS
 1994 THROUGH 2017**

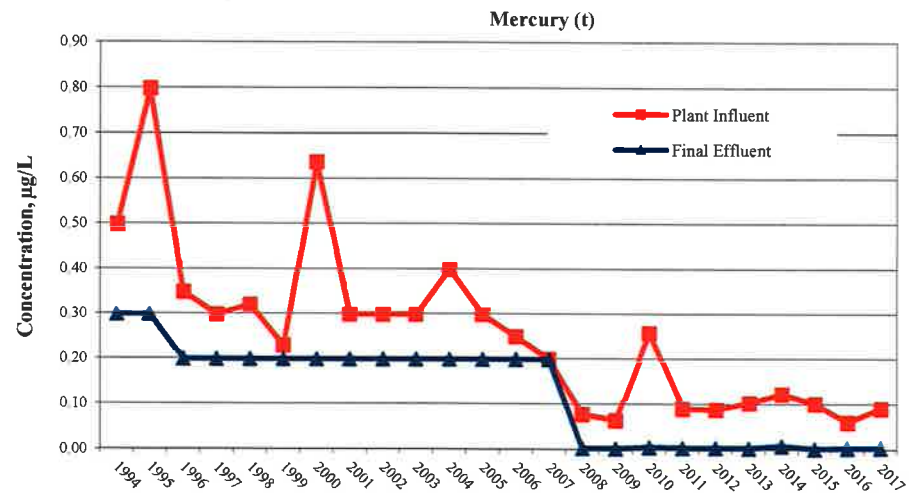
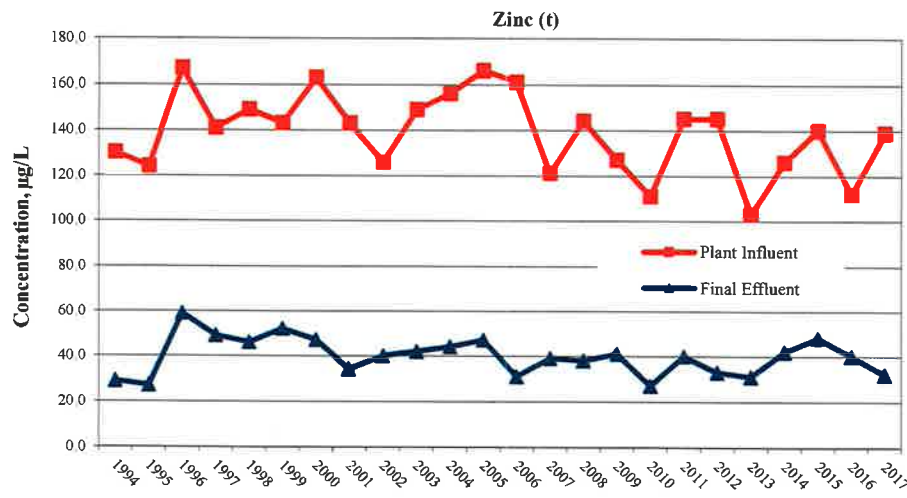
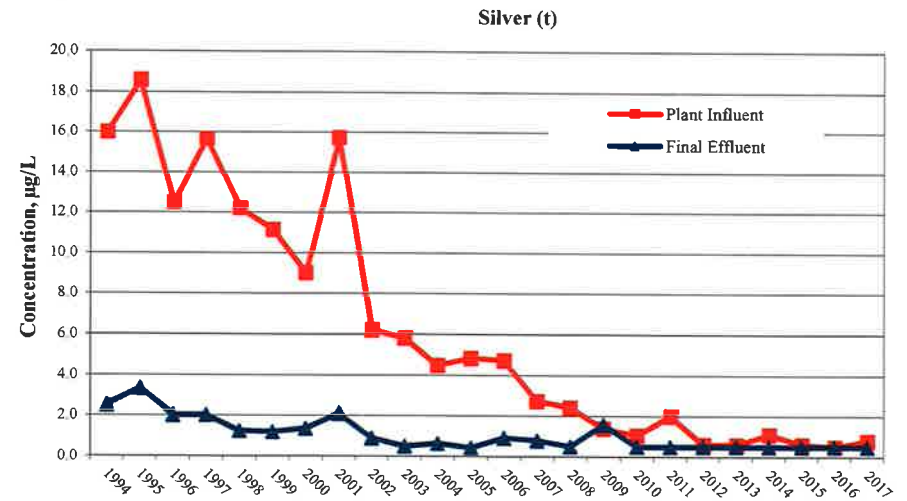
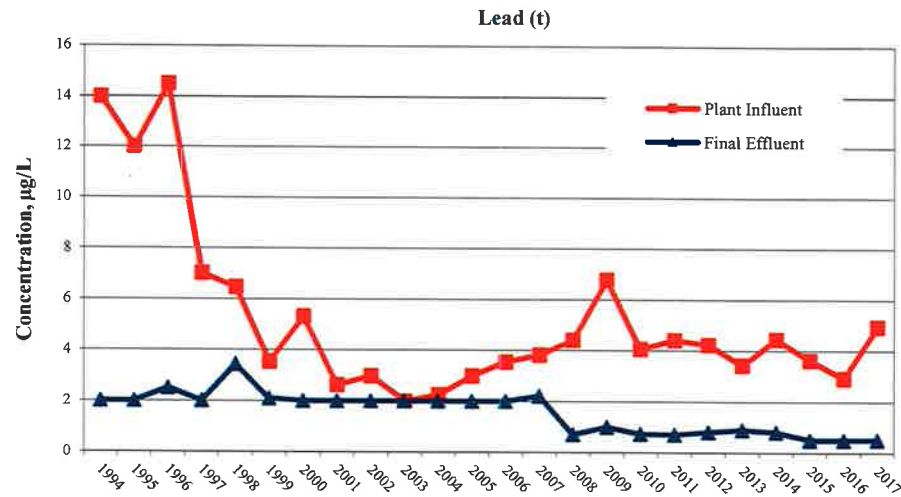
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	Cadmium(t)	Copper (t)	Chromium (t)	Nickel(t)
Influent Headworks Limit	9 ug/L	270 ug/L	260 ug/L	160 ug/L
Effluent Water Quality Criteria (Acute)	27 ug/L	106 ug/L	5,590 ug/L	2,490 ug/L

**LITTLE ROCK WATER RECLAMATION AUTHORITY
 ENVIRONMENTAL ASSESSMENT DEPARTMENT
 ADAMS FIELD WATER RECLAMATION FACILITY CONCENTRATION TRENDS
 1994 THROUGH 2017**

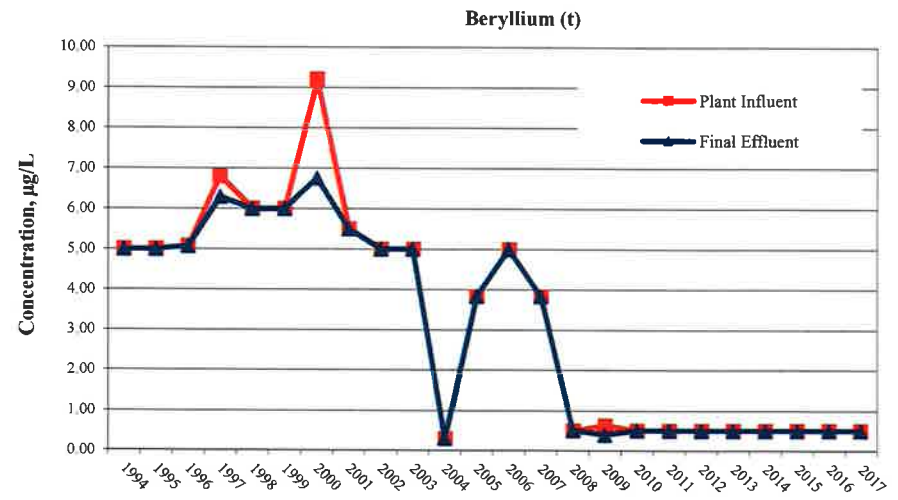
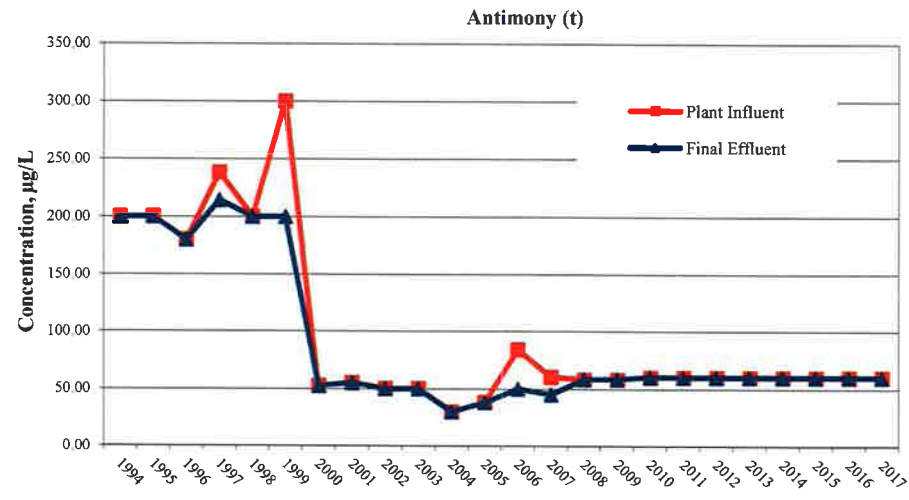
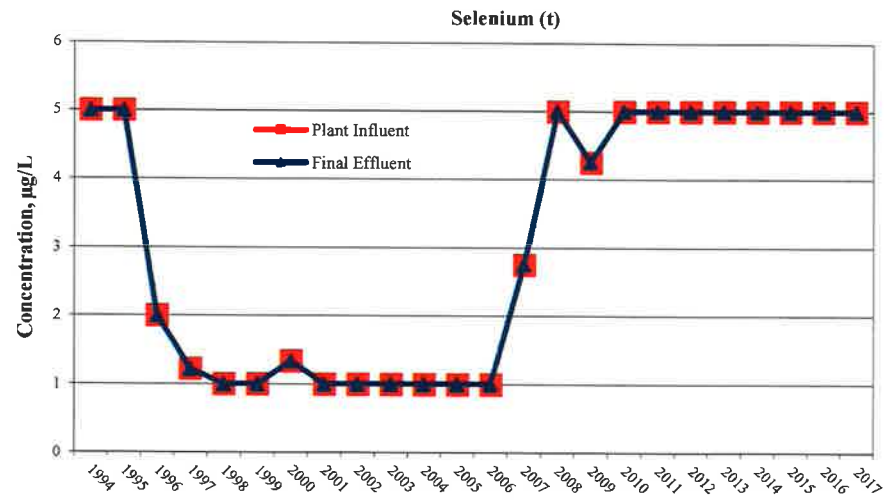
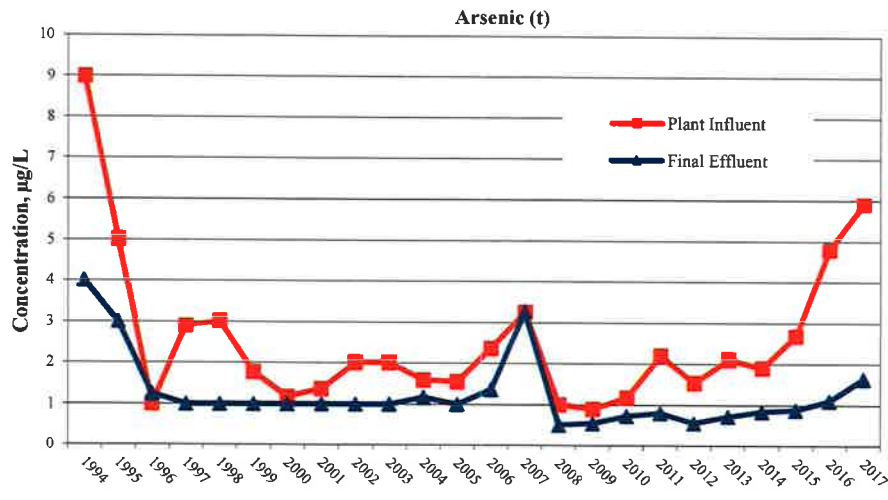
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	Lead (t)	Zinc(t)	Silver(t)	Mercury(t)
Influent Headworks Limit	50 ug/L	360 ug/L	180 ug/L	0.2 ug/L
Effluent Water Quality Criteria (Acute)	98 ug/L	850 ug/L	28 ug/L	0.07 ug/L

**LITTLE ROCK WATER RECLAMATION AUTHORITY
 ENVIRONMENTAL ASSESSMENT DEPARTMENT
 ADAMS FIELD WATER RECLAMATION FACILITY CONCENTRATION TRENDS
 1994 THROUGH 2017**

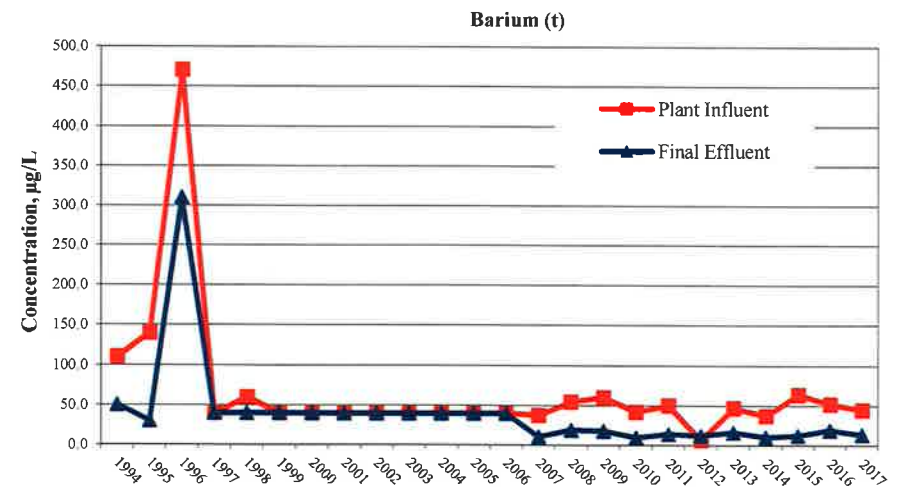
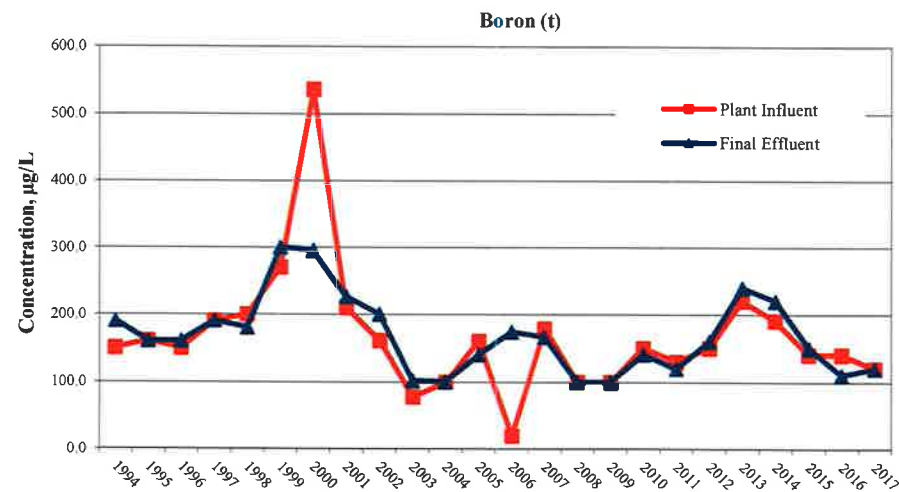
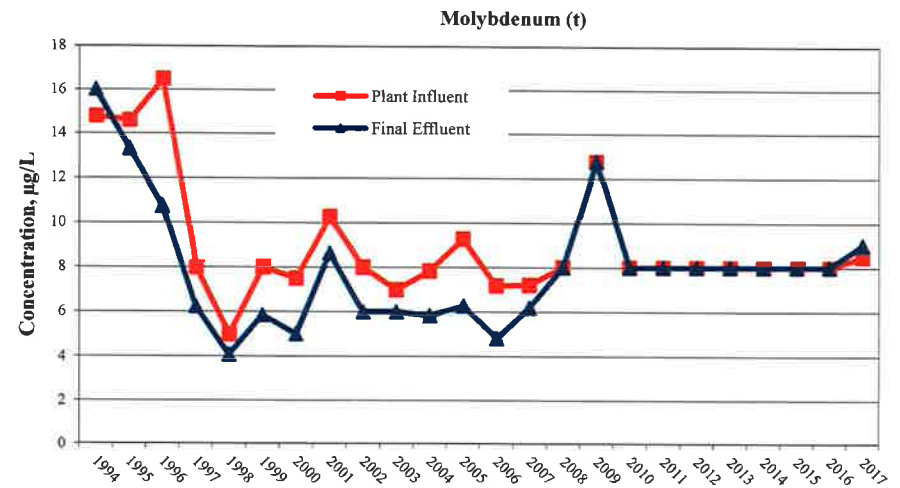
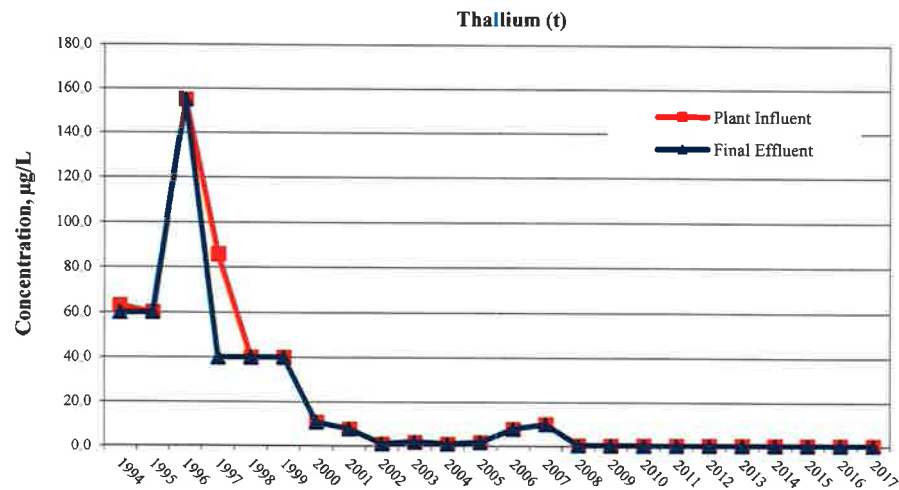
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	Arsenic(t)	Antimony (t)	Selenium (t)	Beryllium (t)
Influent Headworks Limit	14 ug/L	None	10 ug/L	None
Effluent Water Quality Criteria (Acute)	1,190 ug/L	None	28 ug/L	None

**LITTLE ROCK WATER RECLAMATION AUTHORITY
 ENVIRONMENTAL ASSESSMENT DEPARTMENT
 ADAMS FIELD WATER RECLAMATION FACILITY CONCENTRATION TRENDS
 1994 THROUGH 2017**

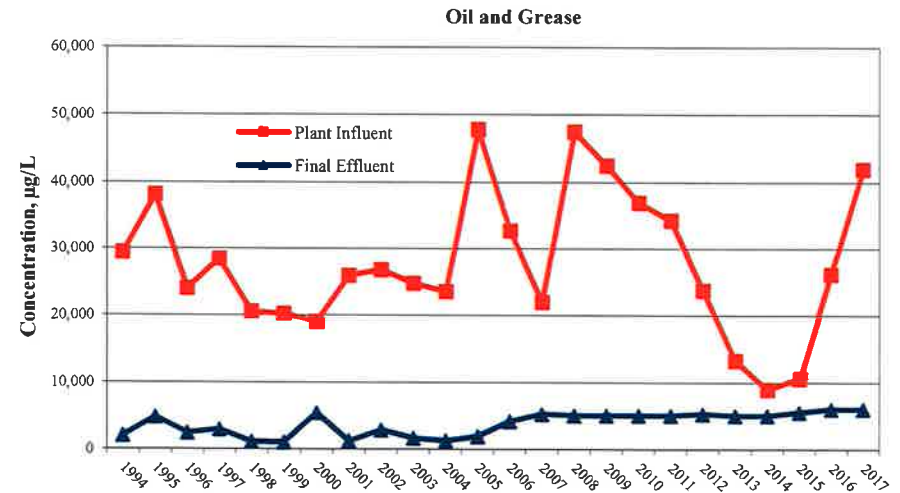
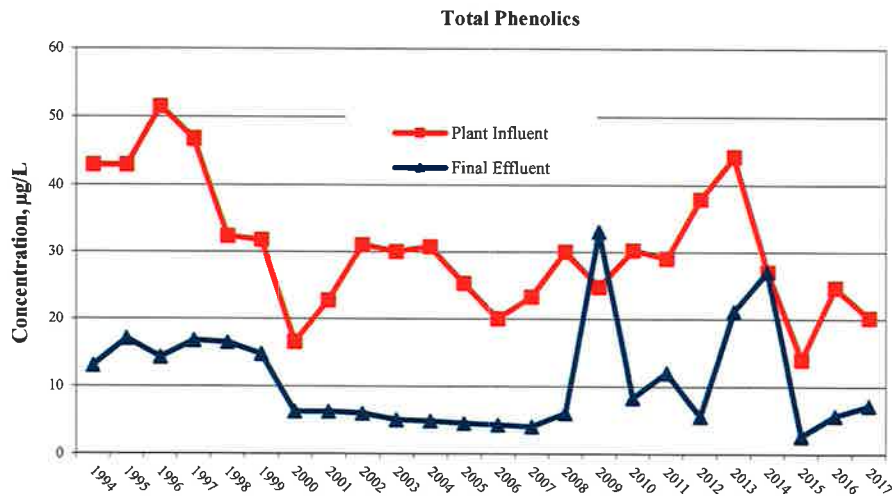
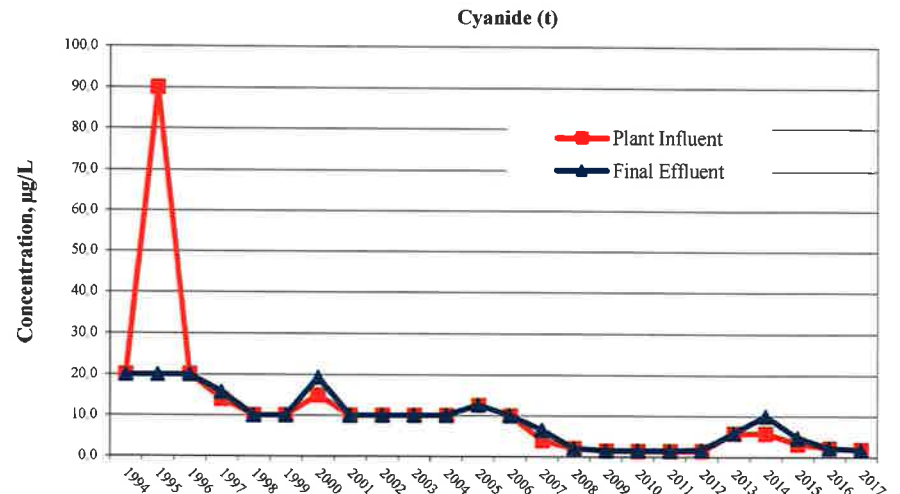
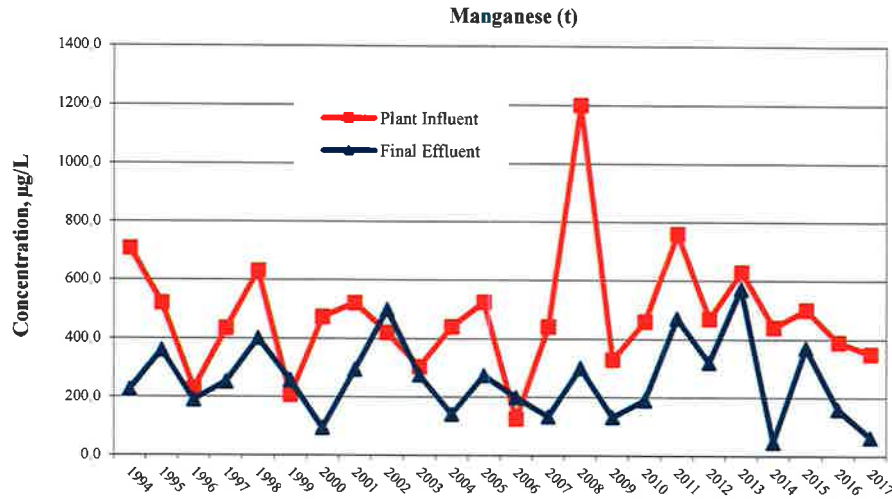
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	Thallium (t)	Boron (t)	Molybdenum(t)	Barium(t)
Influent Headworks Limit	None	None	None	None
Effluent Water Quality Criteria (Acute)	None	None	None	None

**LITTLE ROCK WATER RECLAMATION AUTHORITY
 ENVIRONMENTAL ASSESSMENT DEPARTMENT
 ADAMS FIELD WATER RECLAMATION FACILITY CONCENTRATION TRENDS
 1994 THROUGH 2017**

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	Manganese (t)	Total Phenols	Cyanide (t)	Oil&Grease
Influent Headworks Limit	None	None	90 ug/L	None
Effluent Water Quality Criteria (Acute)	None	None	290 ug/L	None

SUMMARY OF ANALYTICAL RESULTS

FOURCHE CREEK WATER RECLAMATION FACILITY (FC-WRF) INFLUENT AND EFFLUENT ANALYSES

Priority Pollutant Scans were conducted on the Little Rock Water Reclamation Facilities influent and effluent flows in accordance with NPDES permit requirements. Compounds analyzed include metals, cyanide, phenols, volatile organics, base/neutral and acid compounds, and pesticides/PCBs. Results of the analyses are organized in the following order:

- FC-WRF 2017 Sample Results - This information includes a summary page of influent and effluent required test data for parameters from 40 CFR Part 122, Appendix D, Table III reported in a format requested by ADEQ. The summary page is followed by separate influent and effluent data tables.

Sampling and testing frequency requirements for Table III parameters are quarterly (NPDES Permit AR 0040177 Part II). Influent and effluent samples were collected with respect to the detention time across the treatment plant for the sampling events. Table III parameters include total arsenic, cadmium, copper, chromium, lead, mercury, nickel, silver, selenium, zinc, antimony, thallium, beryllium, cyanide and phenols. Other parameters collected four per year include molybdenum and oil and grease.

- Treatment Plant Removal Efficiencies - This page includes the metals percent removal rates for the FC-WRF. These removal rates are calculated based on the influent and effluent concentrations reported in the data tables provided.
- FC-WRF 2017 Priority Pollutant Scan - Organic Fractions - This information includes required test data from 40 CFR Part 122, Appendix D, Table II divided into three parts. Item I: Identifies the positive measurements of organic compounds in the FC-WRF influent and effluent during 2017. Item II: Influent/Effluent organic fraction detections trend chart for 1991 through 2017. Item III is the long term summary of positive results. 40 CFR Part 122, Appendix D, Table II monitoring frequency for 2017 is once per year in accordance with the NPDES Permit 0040177.
- FC-WRF Concentration Trends - This information includes graphs showing FC-WRF influent and effluent concentration trends for the past twenty-three years, 1994-2017. Some peaks may be due to changes in test methods and detection limits.

MONITORING RESULTS FOR THE ANNUAL PRETREATMENT REPORT
REPORTING YEAR: JANUARY 1, 2017 TO DECEMBER 31, 2017
CITY OF LITTLE ROCK - FOURCHE CREEK WATER RECLAMATION FACILITY
NPDES PERMIT NO.: AR0040177

AVERAGE POTW FLOW: 8.64 MGD

PERCENT (%) IU FLOW: 6.71 %

METALS, CYANIDE and PHENOLS	MAHC (Total) (µg/l)	INFLUENT DATES SAMPLED (µg/l) Once/quarter				WQ level/limit (µg/l)	EFFLUENT DATES SAMPLED (µg/l) Once/quarter				LABORATORY ANALYSIS		
		Start Date	Start Date	Start Date	Start Date		Start Date	Start Date	Start Date	Start Date	EPA MQL (µg/l)	EPA Method Used	Detection Level Achieved (µg/l)
		1/17/2017	4/17/2017	7/17/2017	10/23/2017		1/18/2017	4/18/2017	7/18/2017	10/24/2017			
Antimony		< 60	< 60	< 60	< 60		< 60	< 60	< 60	< 60	60	200.8	60
Cadmium	9	< 0.5	< 0.5	< 0.5	< 0.5	107	< 0.5	< 0.5	< 0.5	< 0.5	0.5	200.8	0.5
Copper	270	59.0	42.0	36.0	38.0	619	2.3	5.4	3.5	3.4	0.5	200.8	0.5
Lead	50	3.90	3.40	2.30	3.10	395	< 0.50	< 0.5	< 0.5	< 0.5	0.5	200.8	0.5
Mercury	0.20	0.1250	0.0281	0.0299	0.0456	0.27	0.0061	0.0051	0.0044	0.0022	0.0002	1631E	0.0002
Nickel	160	5.3	6.4	5.1	5.7	9,980	3.9	4.1	4.5	3.5	0.5	200.8	0.5
Selenium	10	< 5	< 5	< 5	< 5	112	< 5	< 5	< 5	< 5	5	200.8	5
Silver	180	< 0.5	< 0.5	< 0.50	< 0.5	165	< 0.5	< 0.5	< 0.5	< 0.5	0.5	200.8	0.5
Zinc	360	210	170	150	200	4,940	< 20	37	40	31	20	200.8	20
Chromium	260	< 10	< 10	< 10	< 10	23,500	< 10	< 10	< 10	< 10	10	200.8	10
Cyanide	90	0.9	< 0.8	< 0.8	< 4.7	116	1.6	< 0.8	< 0.8	< 4.7	10	SM204500C&E-2011	0.8/4.7
Arsenic	14	3.00	4.80	10.00	3.00	6,900	1.10	1.30	1.40	1.00	0.5	200.8	0.5
Molybdenum		< 8.0	< 8.0	< 8.0	10.0		< 8.0	< 8.0	< 8.0	< 10.0	8	200.8	8/10
Phenols		140.1	53.7	101.2	189.9		< 2.2	< 2.2	3.5	4.7	5	420.1	2.2
Beryllium		< 0.5	< 0.5	< 0.5	< 0.5				< 0.5		0.5	200.8	0.5
Thallium		< 0.5	< 0.5	< 0.5	< 0.5				< 0.5		0.5	200.8	0.5
Barium				44					6		2	200.7	2
Boron				190					170		100	200.7	100
Manganese				340					180		2	200.7	2
Oil and Grease		24,500	95,100	78,900	98,500		< 5,000	< 5,000	< 5,000	< 5,000	5000	1664Rev.B-2010	5000
Flow, MGD		11.33	7.90	6.82	6.48		8.32	8.88	7.06	6.60			

**MONITORING RESULTS FOR THE ANNUAL PRETREATMENT REPORT
REPORTING YEAR: JANUARY 1, 2017 TO DECEMBER 31, 2017**

TREATMENT PLANT: CITY OF LITTLE ROCK - FOURCHE CREEK WATER RECLAMATION FACILITY

NPDES PERMIT NO.: AR0040177

AVERAGE POTW FLOW: 8.64 MGD

PERCENT (%) IU FLOW: 6.71 %

PLANT INFLUENT	Flow MGD	O&G µg/L	CN- µg/L	Zn µg/L	Cd µg/L	Cr µg/L	Ag µg/L	Cu µg/L	Mo µg/L	Ni µg/L	Pb µg/L	As µg/L	Se µg/L	Hg µg/L	Phenol µg/L	Sb µg/L	Be µg/L	Tl µg/L	Mn µg/L	Ba µg/L	B µg/L
EPA Test Method Used		1661 Rev. B 2010	SM 4500 C&E 2010/E-2011	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	1631E	420.1	200.8	200.8	200.8	200.8	200.8	200.8
Detection Level Achieved		5000	0.8/4.7	20	0.5	10	0.5	0.5	8/10	0.5	0.5	0.5	5	0.0002	22	60	0.5	0.5	2	2	100
01/17/2017	11.33			210	< 0.5	< 10	< 0.50	59.0	< 8.0	5.3	3.90	3.00	< 5			< 60	< 0.5	< 0.5			
02/02/2017	7.08	24500	0.9											0.1250	140.1						
04/17/2017	7.90			170	< 0.5	< 10	< 0.50	42.0	< 8.0	6.4	3.40	4.80	< 5			< 60	< 0.5	< 0.5			
06/01/2017	7.48	95100	< 0.8											0.0281	53.7						
07/17/2017	6.82			150	< 0.5	< 10	< 0.50	36.0	< 8.0	5.1	2.30	10.00	< 5			< 60	< 0.5	< 0.5	340	44	190
09/07/2017	7.01	78900	< 0.8											0.0299	101.2						
10/23/2017	6.48			200	< 0.5	< 10	< 0.50	38.0	10.0	5.7	3.10	3.00	< 5			< 60	< 0.5	< 0.5			
11/17/2017	7.12	98500	< 4.7											0.0456	189.9						
Average	7.65	74250	1.8	183	< 0.5	< 10	< 0.50	43.8	8.5	5.6	3.18	5.20	< 5	0.0572	121.2	< 60	< 0.5	< 0.5	340	44	190
Maximum	11.33	98500	< 4.7	210	< 0.5	< 10	< 0.50	59.0	10.0	6.4	3.90	10.00	< 5	0.1250	189.9	< 60	< 0.5	< 0.5	340	44	190
Minimum	6.48	24500	< 0.8	150	< 0.5	< 10	< 0.50	36.0	< 8.0	5.1	2.30	3.00	< 5	0.0281	53.7	< 60	< 0.5	< 0.5	340	44	190
Headworks limit			90	360	9.0	260.0	180.0	270		160	50	14	10	0.2							

Comments:

**MONITORING RESULTS FOR THE ANNUAL PRETREATMENT REPORT
REPORTING YEAR: JANUARY 1, 2017 TO DECEMBER 31, 2017**

TREATMENT PLANT: CITY OF LITTLE ROCK - FOURCHE CREEK WATER RECLAMATION FACILITY

NPDES PERMIT NO.: AR0040177

AVERAGE POTW FLOW: 8.64 MGD

PERCENT (%) IU FLOW: 6.71 %

FINAL EFFLUENT	Flow MGD	O&G µg/L	CN- µg/L	Zn µg/L	Cd µg/L	Cr µg/L	Ag µg/L	Cu µg/L	Mo µg/L	Ni µg/L	Pb µg/L	As µg/L	Se µg/L	Hg µg/L	Phenol µg/L	Sb µg/L	Be µg/L	Tl µg/L	Mn µg/L	Ba µg/L	B µg/L
EPA Test Method Used		1664REV.B 2010	SM 4500 C&E 2010/E-2011	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	1631E	420.1	200.8	200.8	200.8	200.7	200.7	200.7
Detection Level Achieved		5000	0.8/4.7	20	0.5	10	0.5	0.5	8/10	0.5	0.5	0.5	5	0.0002	2.2	0.06	0.5	0.5	2	2	100
01/18/2017	8.32			< 20	< 0.5	< 10	< 0.50	2.3	< 8.0	3.9	< 0.50	1.10	< 5			< 60	< 0.5	< 0.5			
02/02/2017	7.27	< 5000	1.6											0.0061	< 2.2						
04/18/2017	8.88			37	< 0.5	< 10	< 0.50	5.4	< 8.0	4.1	< 0.50	1.30	< 5			< 60	< 0.5	< 0.5			
06/01/2017	8.23	< 5000	< 0.8											0.0051	< 2.2						
07/18/2017	7.06			40	< 0.5	< 10	< 0.50	3.5	< 8.0	4.5	< 0.50	1.40	< 5			< 60	< 0.5	< 0.5	180	6	170
09/07/2017	7.48	< 5000	< 0.8											0.0044	3.5						
10/24/2017	6.60			31	< 0.5	< 10	< 0.50	3.4	< 10.0	3.5	< 0.50	1.00	< 5			< 60	< 0.5	< 0.5			
11/16/2017	7.16	< 5000	< 4.7											0.0022	4.7						
Average	7.63	< 5000	2.0	32	< 0.5	< 10	< 0.50	3.7	< 8.5	4.0	< 0.50	1.20	< 5	0.0044	3.2	< 60	< 0.5	< 0.5	180	6	170
Maximum	8.88	< 5000	< 4.7	40	< 0.5	< 10	< 0.50	5.4	< 10.0	4.5	< 0.50	1.40	< 5	0.0061	4.7	< 60	< 0.5	< 0.5	180	6	170
Minimum	6.60	< 5000	< 0.8	< 20	< 0.5	< 10	< 0.50	2.3	< 8.0	3.5	< 0.50	1.00	< 5	0.0022	< 2.2	< 60	< 0.5	< 0.5	180	6	170
WQS Effluent Level																					
Day Max.			116	4940	107	23500	165	619		9980	395	6900	112	0.27							
Month Avg.			58	2460	53	11700	82	309		4980	197	3440	56	0.14							

Comments:

**MONITORING RESULTS FOR THE ANNUAL PRETREATMENT REPORT
TREATMENT PLANT PERCENT REMOVAL EFFICIENCIES
REPORTING YEAR: JANUARY 1, 2017 TO DECEMBER 31, 2017**

Fourche Creek Water Reclamation Facility - NPDES Permit No. AR0040177

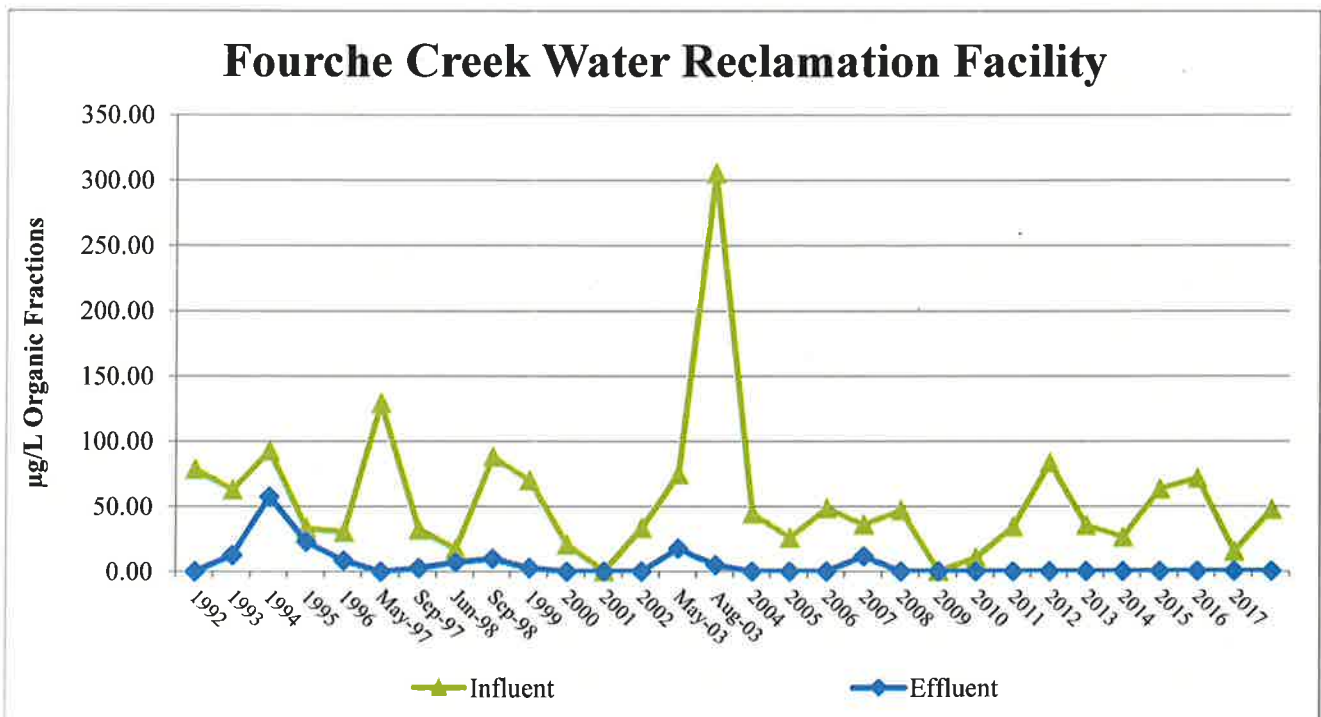
	O&G	CN-	Zn	Cd	Cr	Ag	Cu	Mo	Ni	Pb	As	Se	Hg	Phenol	Sb	Be	Tl	Mn	Ba	B
01/17/2017			90.5%	0.0%	0.0%	0.0%	96.1%	0.0%	26.4%	87.2%	63.3%	0.0%			0.0%	0.0%	0.0%			
02/02/2017	79.6%	-77.8%											95.1%	98.4%						
04/17/2017			78.2%	0.0%	0.0%	0.0%	87.1%	0.0%	35.9%	85.3%	72.9%	0.0%			0.0%	0.0%	0.0%			
06/01/2017	94.7%	0.0%											82.0%	95.9%						
07/17/2017			73.3%	0.0%	0.0%	0.0%	90.3%	0.0%	11.8%	78.3%	86.0%	0.0%			0.0%	0.0%	0.0%	47.1%	85.7%	10.5%
09/07/2017	93.7%	0.0%											85.4%	96.5%						
10/23/2017			84.5%	0.0%	0.0%	0.0%	91.1%	0.0%	38.6%	83.9%	66.7%	0.0%			0.0%	0.0%	0.0%			
11/17/2017	94.9%	0.0%											95.2%	97.5%						
Average	90.7%	-19.4%	78.7%	0.0%	0.0%	0.0%	91.1%	0.0%	28.2%	83.7%	72.2%	0.0%	89.4%	97.1%	0.0%	0.0%	0.0%	47.1%	85.7%	10.5%

I. 2017 INFLUENT / EFFLUENT POSITIVE RESULTS, µg/L

FOURCHE CREEK WATER RECLAMATION FACILITY		
Sample Date	Compound	Influent
9/12/2017	phenol	16
	Volatiles	18
	Acid Compounds, Pesticides/PCBs, Chlorpyrifos	13
Sample Date	Compound	Effluent
9/12/2017	Volatiles	ND
	Base/Neutral, Acid Compounds, Pesticides/PCBs, Chlorpyrifos	ND

Comments: ND - No Detection

II. TREND OF POSITIVE RESULTS - REPORTING PERIOD 1991 THROUGH 2017



III. SUMMARY OF POSITIVE RESULTS - REPORTING PERIOD 2012 THROUGH 2017

Fourche Creek Water Reclamation Facility

PPS, µg/L Parameter	2012		2013		2014		2015		2016		2017	
	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF
Bis(2-ethylhexyl)Phthalate	ND	ND	10.0	ND	17.0	ND	27.0	ND		ND	13.0	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1 Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	16	ND	ND	ND	21	ND	22	ND	ND	ND	18	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4'4'-DDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	19	ND	16	ND	25	ND	22	ND	15	ND	16	ND
Dibutylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4, Dimethyl phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beta-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-Octyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total	35.00	0.00	26.00	0.00	63.00	0.00	71.00	0.00	15.00	0.00	47.00	0.00

Comments

III. SUMMARY OF POSITIVE RESULTS - REPORTING PERIOD 2004 THROUGH 2011

Fourche Creek Water Reclamation Facility

PPS, µg/L Parameter	2004		2005		2006		2007		2008		2009		2010		2011	
	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF ¹	EFF ¹	INF	EFF	INF	EFF	INF	EFF
Bis(2-ethylhexyl)Phthalate	12.5	ND	22.4	ND	18.1	ND	19.2	ND	ND	ND	10.3	ND	ND	ND	11.0	ND
Chloroform	13.0	ND	12.8	ND	ND	ND	12.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1 Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4'4'-DDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ND	ND	ND	ND	17.4	11.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	ND	ND	12.8	ND	ND	ND	14.5	ND	ND	ND	ND	ND	34	ND	19	ND
Dibutylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4, Dimethyl phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beta-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-Octyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,Dichlorobenzene															2.8	ND
Endrin aldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total	25.50	0.00	48.00	0.00	35.50	11.60	46.50	0.00	0.00	0.00	10.30	0.00	34.00	0.00	82.80	0.00

Comments

- Parameters were retested due to elevated detection limits for some parameters due to dilution factors used in laboratory.

III. SUMMARY OF POSITIVE RESULTS - REPORTING PERIOD 1998 THROUGH 2003

Fourche Creek Water Reclamation Facility

PPS, µg/L Parameter	Jun-98		Sep-98		1999		2000		2001		2002		May-03		Aug-03	
	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF ¹	EFF ¹	INF ²	EFF ²
Bis(2-ethylhexyl)Phthalate	23.0	3.60	26.0	ND	20.4	ND	ND	ND	15.0	ND	18.0	2.7	75.0	ND	21.0	ND
Chloroform	12.00	3.80	8.2	2.6	ND	ND	ND	ND	ND	ND	15.0	7.5	9.5	4.8	13.0	ND
1,1,1 Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethane	4.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	14.00	ND	7.1	ND	ND	ND	ND	ND	17.9	ND	6.7	ND	9.6	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	210	ND	ND	ND
4'4'-DDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.82	ND	ND	ND
Di-n-butyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.1	4.6	ND	ND	10	ND
Diethylphthalate	9.20	ND	8.6	ND	ND	ND	ND	ND	ND	ND	9.7	ND	ND	ND	ND	ND
Butylbenzylphthalate	3.90	ND	4.0	ND	ND	ND	ND	ND	ND	ND	6.0	2.6	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND	ND	ND	ND	ND
Phenol	12.00	ND	6.9	ND	ND	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND
Dibutylphthalate	5.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4, Dimethyl phenol	4.40	ND	8.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.019	ND	ND	ND	ND
Dieldrin	ND	ND	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.014	ND	ND	ND	ND	ND
Beta-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.032	ND	ND
Gamma-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.036	0.017	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.032	ND	ND
Di-n-Octyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	ND	2.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,Dichlorobenzene																
Endrin aldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.025	ND	ND	ND	ND
Total	87.70	9.90	69.50	2.60	20.40	0.00	0.00	0.00	32.90	0.00	74.15	17.46	304.92	4.86	44.00	0.00

Comments

1. May-2003 parameters were retested due to elevated detection limits for some parameters due to dilution factors used in laboratory.
2. Parameters were retested due to elevated detection limits for some parameters due to dilution factors used in laboratory.

III. SUMMARY OF POSITIVE RESULTS - REPORTING PERIOD 1991 THROUGH 1997

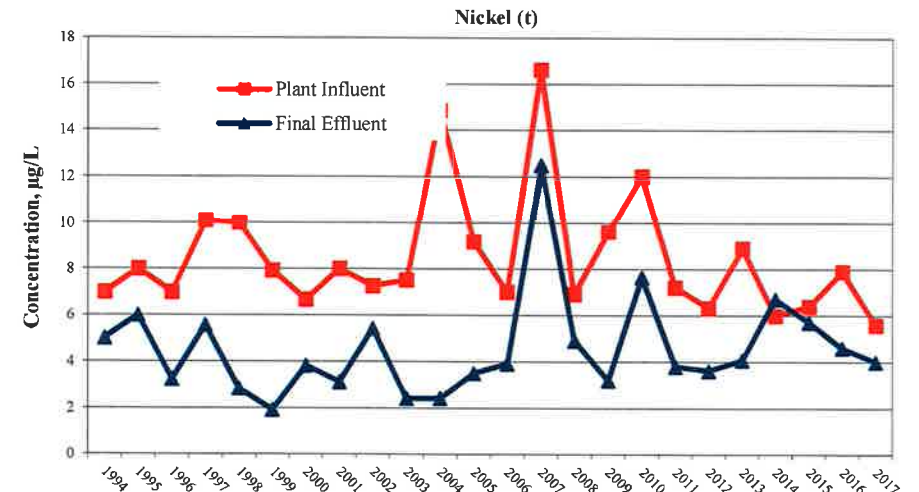
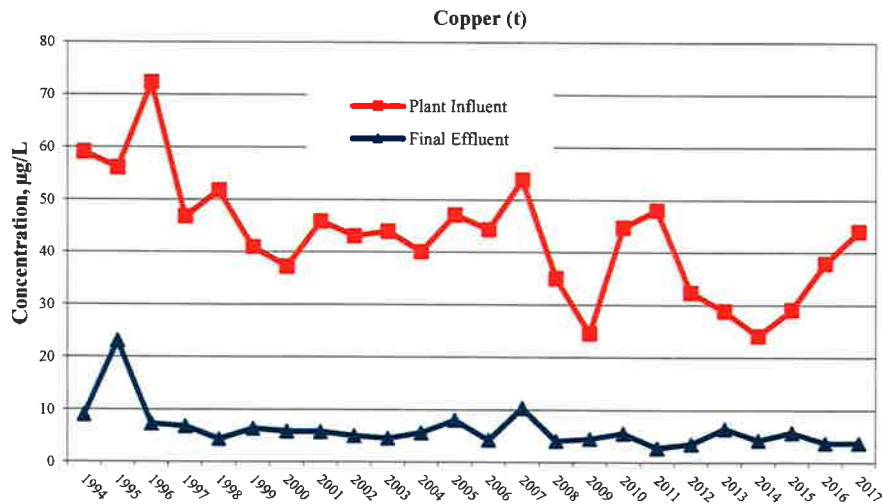
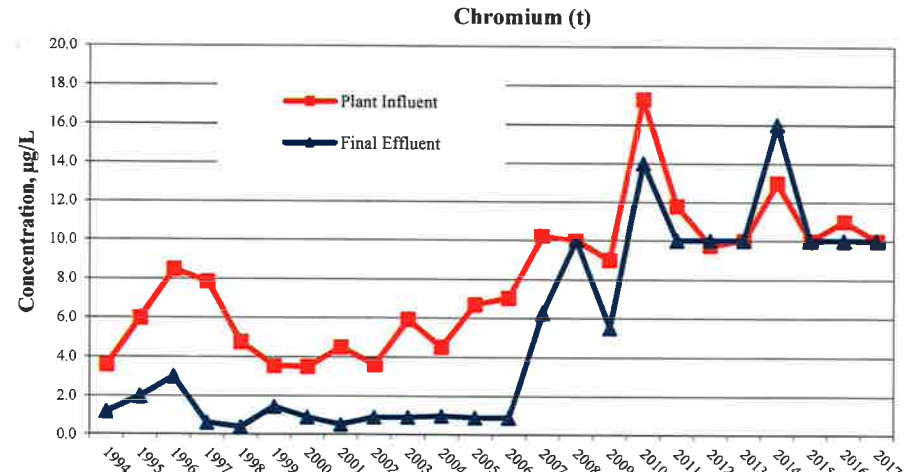
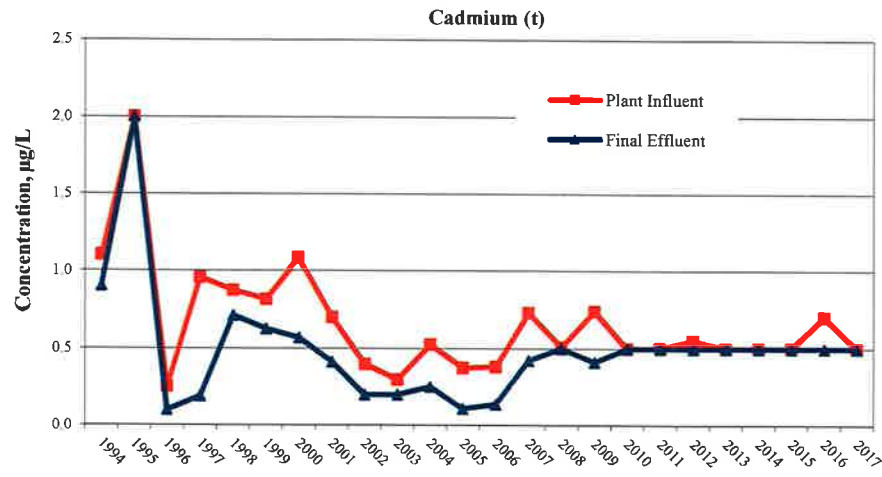
Fourche Creek Water Reclamation Facility

PPS, µg/L Parameter	1991		1992		1993		1994		1995		1996		May-97		Sep-97	
	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF
Bis(2-ethylhexyl)Phthalate	24.00	ND	23.0	7.0	44.0	18.0	11.60	ND	30.0	5.8	ND	ND	17.2	ND	ND	6.98
Chloroform	ND	ND	17.0	5.4	8.9	27.0	10.70	ND	ND	ND	ND	ND	14.50	ND	8.0	ND
1,1,1 Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	17.6	ND	ND	ND	ND	ND
Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	89.8	ND	ND	ND	ND	ND
Toluene	ND	ND	7.70	ND	10.0	ND	ND	ND	ND	ND	20.8	ND	ND	ND	8.8	ND
Methylene Chloride	ND	ND	3.80	ND	ND	ND	10.40	22.90	ND	ND	ND	ND	ND	ND	ND	ND
4'4'-DDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ND	ND	ND	ND	9.4	3.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	ND	ND	11.0	ND	14.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibutylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4, Dimethyl phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beta-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	54.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-Octyl phthalate	ND	ND	ND	ND	5.9	8.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.50	ND	ND	ND	2.50	ND	ND
1,3,Dichlorobenzene																
Endrin aldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.48	ND	ND	ND	0.48	ND
Total	78.00	0.00	62.50	12.40	92.2	57.3	32.70	22.90	30.00	8.30	128.68	0.00	31.70	2.50	17.28	6.98

Comments

**LITTLE ROCK WATER RECLAMATION AUTHORITY
 ENVIRONMENTAL ASSESSMENT DEPARTMENT
 FOURCHE CREEK WATER RECLAMATION FACILITY CONCENTRATION TRENDS
 1994 THROUGH 2017**

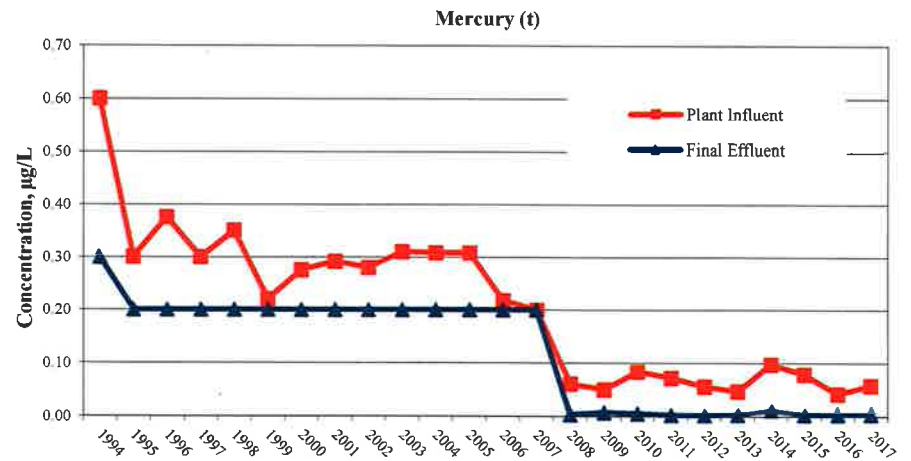
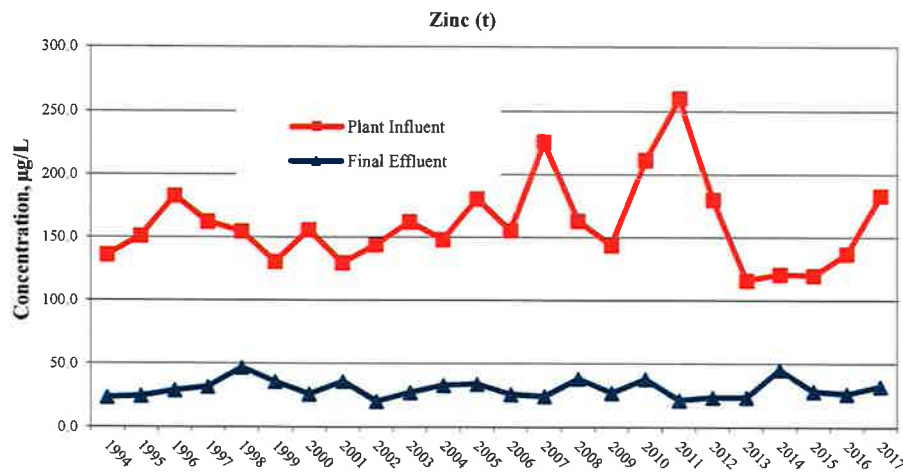
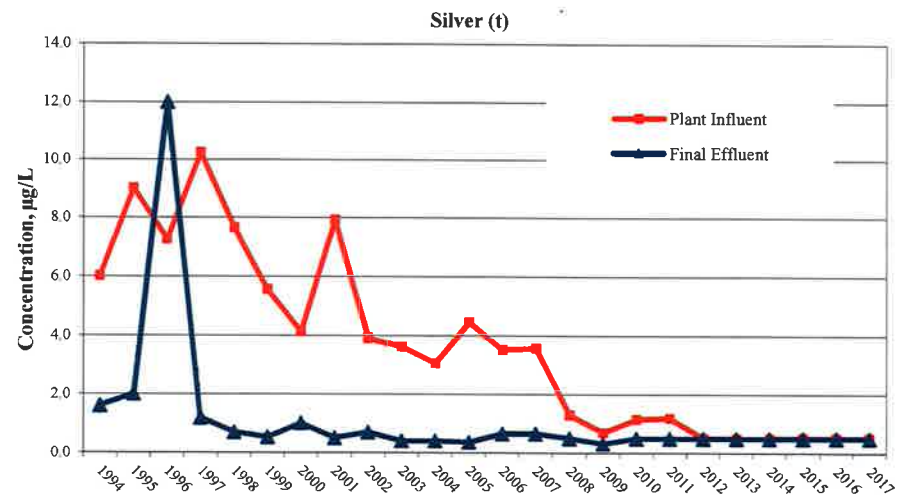
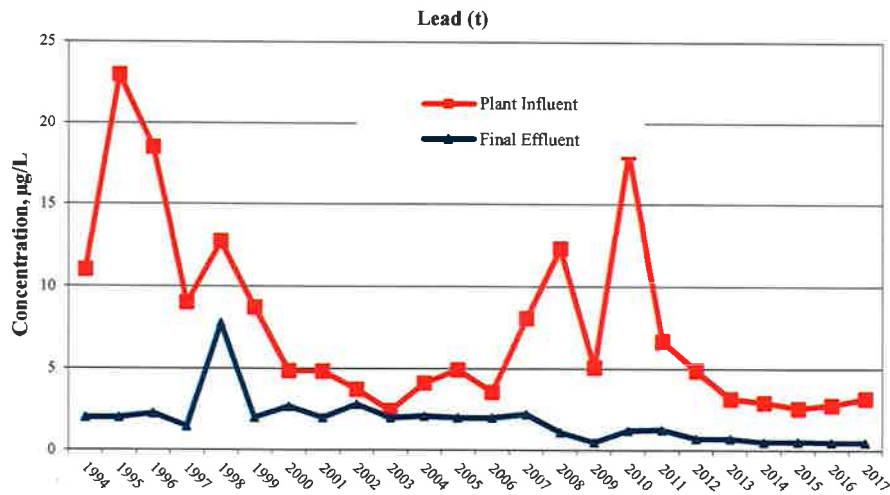
February 28, 2018
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	Cadmium(t)	Copper (t)	Chromium (t)	Nickel(t)
Influent Headworks Limit	9 ug/L	270 ug/L	260 ug/L	160 ug/L
Effluent Water Quality Criteria	53 ug/L	395 ug/L	11,700 ug/L	4,980 ug/L

**LITTLE ROCK WATER RECLAMATION AUTHORITY
 ENVIRONMENTAL ASSESSMENT DEPARTMENT
 FOURCHE CREEK WATER RECLAMATION FACILITY CONCENTRATION TRENDS
 1994 THROUGH 2017**

February 28, 2018
 Page 2 of 5



Influent Headworks Limit
Effluent Water Quality Criteria

Lead (t)
50 µg/L
197 µg/L

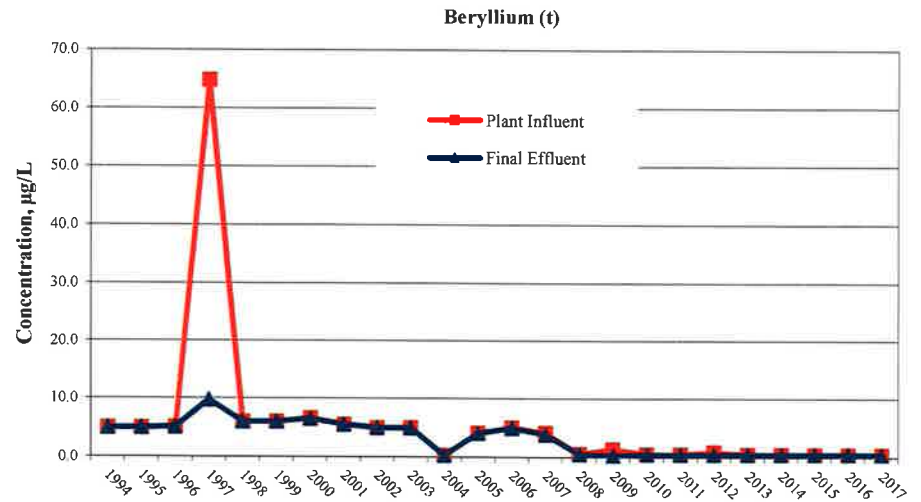
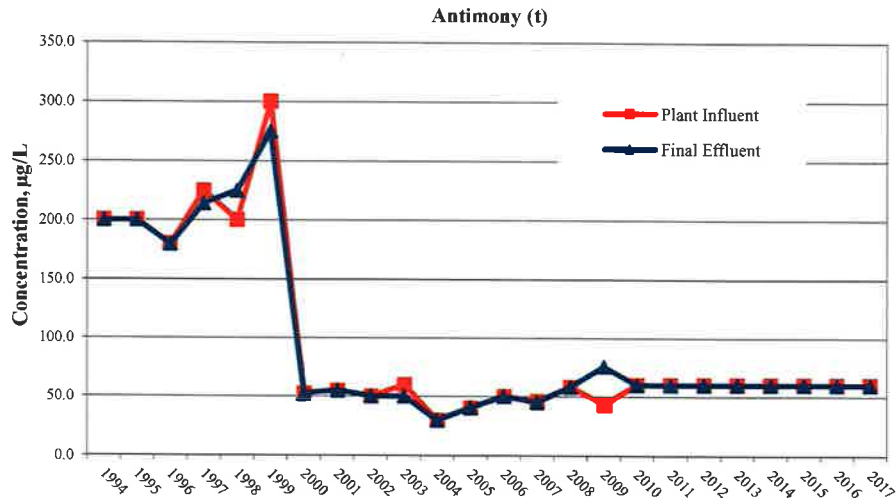
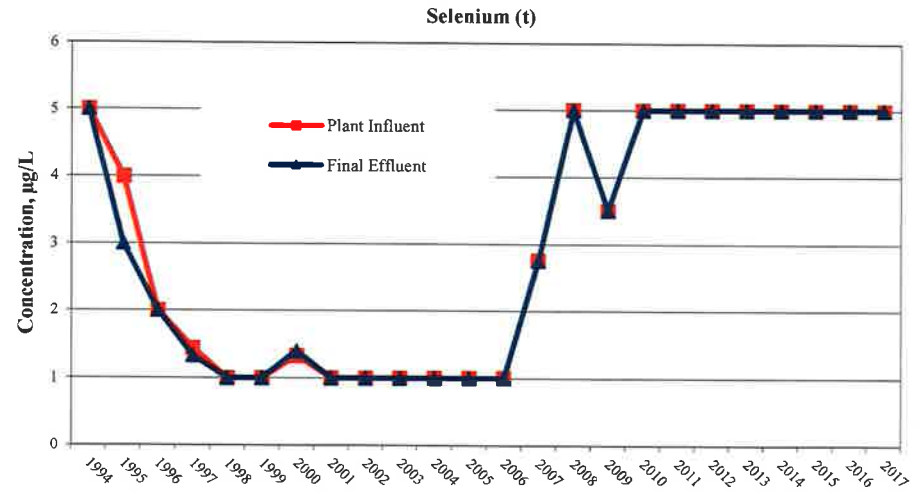
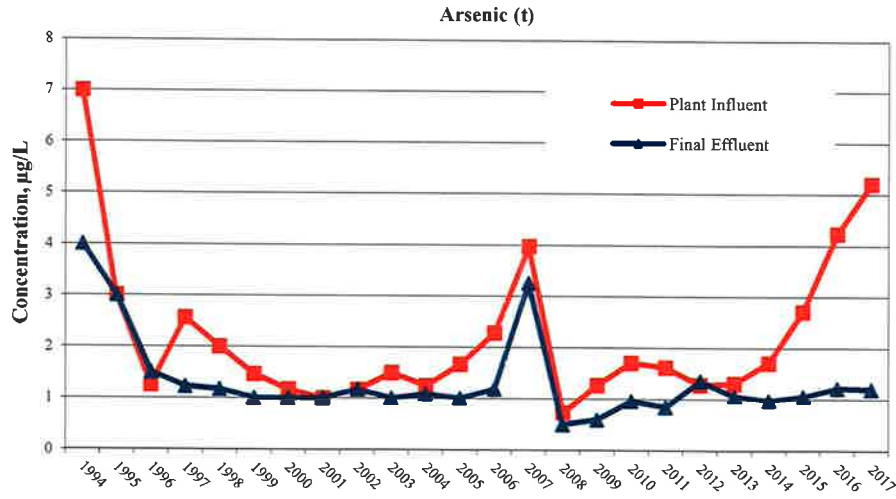
Zinc(t)
360 µg/L
2460 µg/L

Silver(t)
180 µg/L
56 µg/L

Mercury(t)
0.2 µg/L
0.14 µg/L

**LITTLE ROCK WATER RECLAMATION AUTHORITY
 ENVIRONMENTAL ASSESSMENT DEPARTMENT
 FOURCHE CREEK WATER RECLAMATION FACILITY CONCENTRATION TRENDS
 1994 THROUGH 2017**

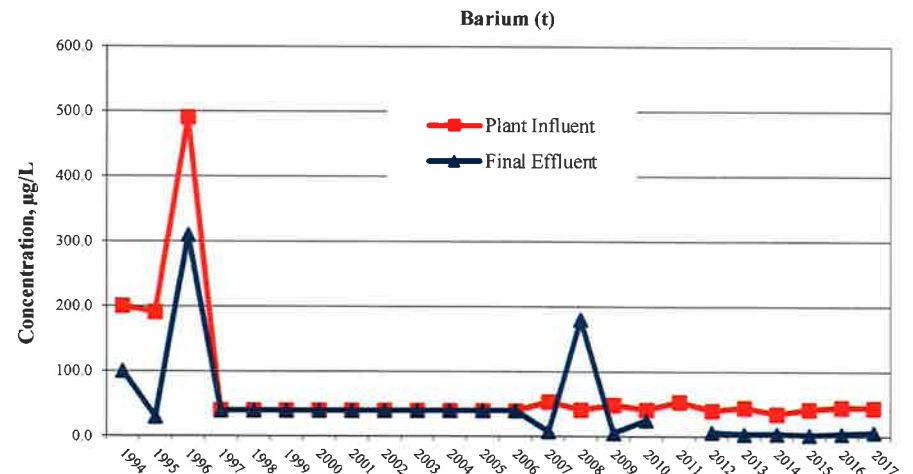
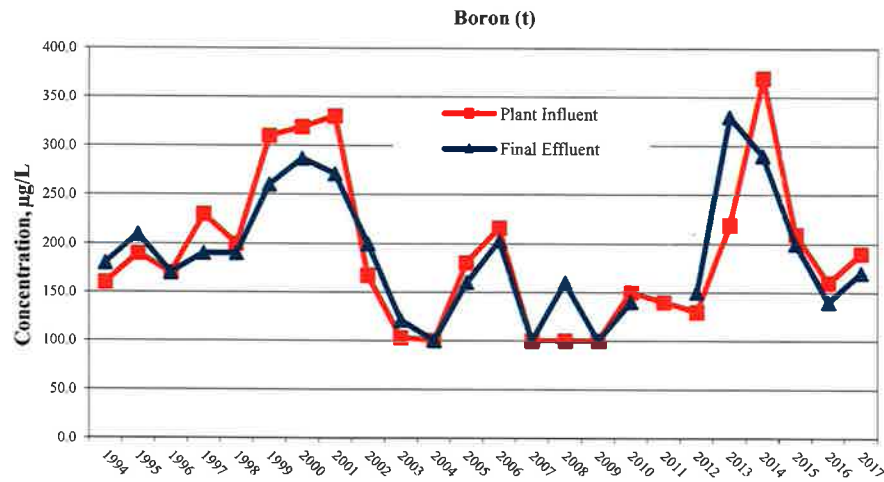
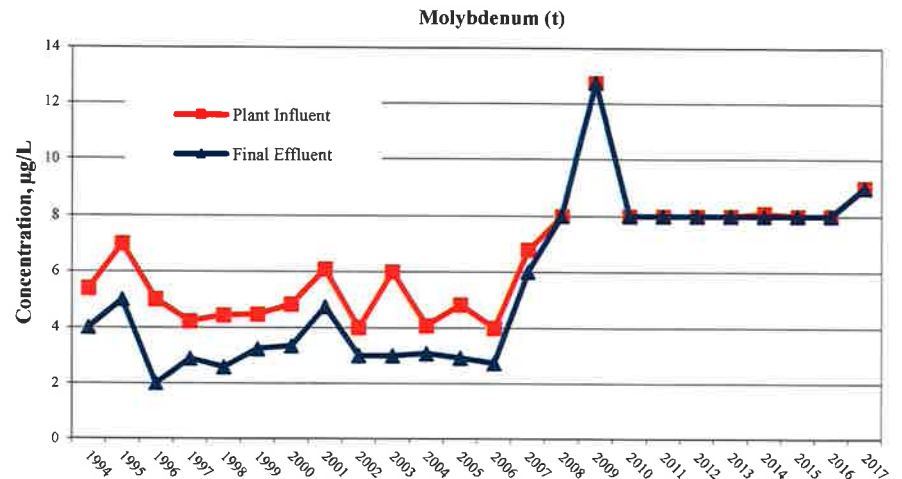
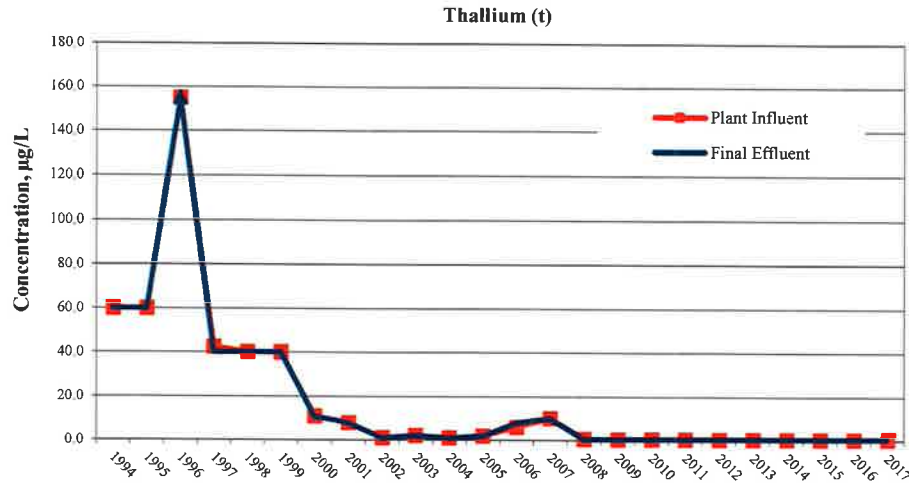
February 28, 2018
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	Arsenic(t)	Antimony (t)	Selenium (t)	Beryllium (t)
Influent Headworks Limit	14 ug/L	None	10 ug/L	None
Effluent Water Quality Criteria	3,440 ug/L	None	56 ug/L	None

**LITTLE ROCK WATER RECLAMATION AUTHORITY
 ENVIRONMENTAL ASSESSMENT DEPARTMENT
 FOURCHE CREEK WATER RECLAMATION FACILITY CONCENTRATION TRENDS
 1994 THROUGH 2017**

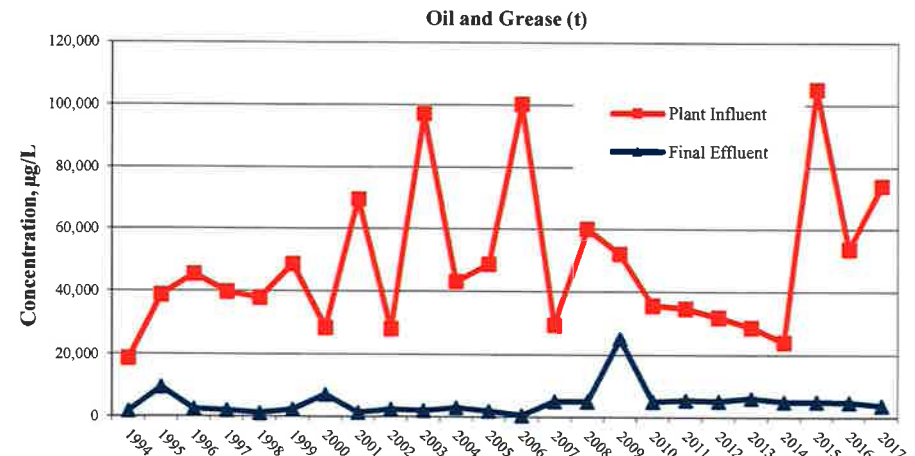
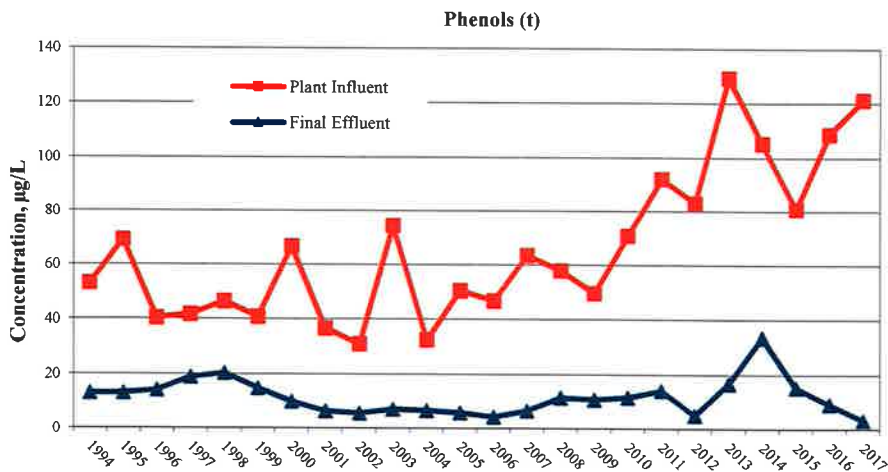
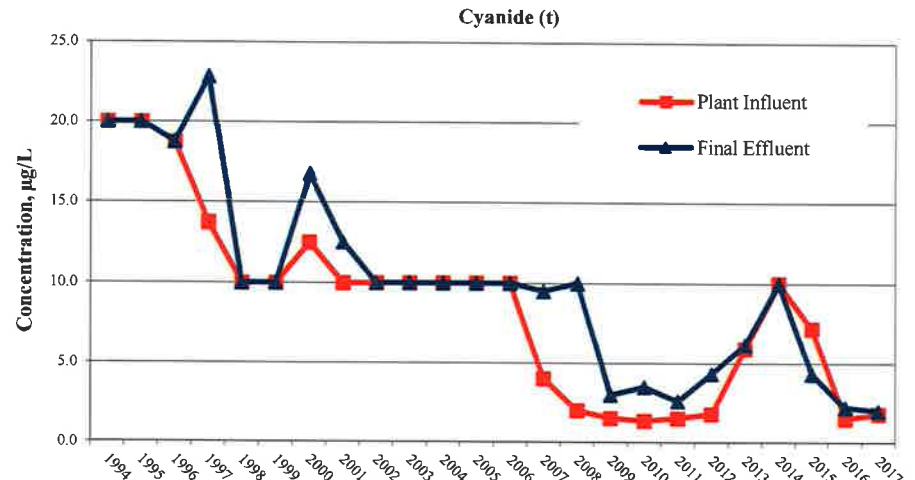
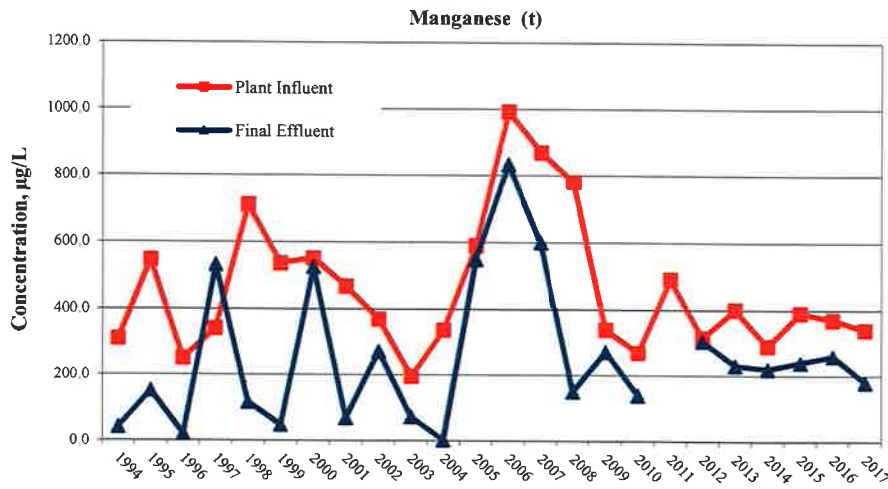
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	Thallium (t)	Boron (t)	Molybdenum(t)	Barium(t)
Influent Headworks Limit	None	None	None	None
Effluent Water Quality Criteria	None	None	None	None

**LITTLE ROCK WATER RECLAMATION AUTHORITY
 ENVIRONMENTAL ASSESSMENT DEPARTMENT
 FOURCHE CREEK WATER RECLAMATION FACILITY CONCENTRATION TRENDS
 1994 THROUGH 2017**

February 28, 2018
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	Manganese (t)	Total Phenols	Cyanide (t)	Oil&Grease
Influent Headworks Limit	None	None	90 ug/L	None
Effluent Water Quality Criteria	None	None	58 ug/L	None

SUMMARY OF ANALYTICAL RESULTS

LITTLE MAUMELLE WATER RECLAMATION FACILITY (LM-WRF) INFLUENT AND EFFLUENT ANALYSES

Priority Pollutant Scans were conducted on the Little Rock Water Reclamation Facilities influent and effluent flows in accordance with our NPDES permit requirements. Compounds analyzed include metals, cyanide, phenols, volatile organics, base/neutral and acid compounds, and pesticides/PCBs. Results of the analyses are organized in the following order:

- LM-WRF 2017 Sample Results - This information includes a summary page of influent and effluent required test data for parameters from 40 CFR Part 122, Appendix D, Table III reported in a format requested by ADEQ. The summary page is followed by separate influent and effluent data tables.

Sampling and testing frequency requirements for Table III parameters are once per year (NPDES Permit AR 0050849 Part II). Influent and effluent samples were collected with respect to the detention time across the treatment plant for the sampling events. Table III parameters include total arsenic, cadmium, copper, chromium, lead, mercury, nickel, silver, selenium, zinc, antimony, thallium, beryllium, cyanide and phenols. Other parameters collected once per year include molybdenum and oil and grease.

- Treatment Plant Removal Efficiencies - This page includes the metals percent removal rates for the LM-WRF. These removal rates are calculated based on the influent and effluent concentrations reported in the data tables provided.
- LM-WRF 2017 Priority Pollutant Scan - Organic Fractions - This information includes required test data from 40 CFR Part 122, Appendix D, Table II divided into three parts. Item I: Identifies the positive measurements of organic compounds in the LM-WRF influent and effluent during 2017. Item II: Influent/Effluent organic fraction detections trend chart for 2011 through 2017. Item III is the long term summary of positive results. 40 CFR Part 122, Appendix D, Table II monitoring frequency for 2017 is once per year in accordance with the NPDES Permit 0050849.
- LM-WRF Concentration Trends - This information includes graphs showing LM-WRF influent and effluent concentration trends for the past four years 2011-2017. Some peaks may be due to changes in test methods and detection limits.

MONITORING RESULTS FOR THE ANNUAL PRETREATMENT REPORT
REPORTING YEAR: JANUARY 1, 2017 TO DECEMBER 31, 2017
CITY OF LITTLE ROCK - LITTLE MAUMELLE WATER RECLAMATION FACILITY
NPDES PERMIT NO.: AR0050849

AVERAGE POTW FLOW: 2.25 MGD

PERCENT (%) IU FLOW: 0 %

METALS, CYANIDE and PHENOLS	MAHC (Total) (µg/l)	INFLUENT DATES SAMPLED (µg/l) Once/year				WQ level/limit (µg/l)	EFFLUENT DATES SAMPLED (µg/l) Once/year				LABORATORY ANALYSIS		
		Start Date	Start Date	Start Date	Start Date		Start Date	Start Date	Start Date	Start Date	EPA MQL (µg/l)	EPA Method Used	Detection Level Achieved (µg/l)
				7/31/2017					8/2/2017				
Antimony				< 60				< 60		60	200.8	60	
Cadmium	9			< 0.5	N/A			< 0.5		0.5	200.8	0.5	
Copper	270			22.0	N/A			5.6		0.5	200.8	0.5	
Lead	50			0.7	N/A			< 0.5		0.5	200.8	0.5	
Mercury	0.20			0.0903	N/A			0.0048		0.0002	1631E	0.0002	
Nickel	160			2.4	N/A			2.1		0.5	200.8	0.5	
Selenium	10			< 5	N/A			< 5		5	200.8	5	
Silver	180			< 0.5	N/A			< 0.5		0.5	200.8	0.5	
Zinc	360			120	N/A			57		20	200.8	20	
Chromium	260			< 10	N/A			< 10		10	200.8	10	
Cyanide	90			< 0.8	N/A			< 1.7		10	SM204500C&E-2011	0.8	
Arsenic	14			3.2	N/A			0.9		0.5	200.8	0.5	
Molybdenum				< 8				< 8		8	200.8	8	
Phenols				26.9				8.1		2.2	420.1	2.2	
Beryllium				< 0.5				< 0.5		0.5	200.8	0.5	
Thallium				< 0.5				< 0.5		0.5	200.8	0.5	
Barium				20				4.9		2	200.7	2	
Boron				200				190		100	200.7	100	
Manganese				330				64		2	200.7	2	
Oil and Grease				19,700				9,700		5000	1664Rev.B-2010	5000	
Flow, MGD				1.68				2.32					

**MONITORING RESULTS FOR THE ANNUAL PRETREATMENT REPORT
REPORTING YEAR: JANUARY 1, 2017 TO DECEMBER 31, 2017**

TREATMENT PLANT: CITY OF LITTLE ROCK -LITTLE MAUMELLE WATER RECLAMATION FACILITY

NPDES PERMIT NO.: AR0050849

AVERAGE POTW FLOW: 2.25 MGD

PERCENT (%) IU FLOW: 0 %

PLANT INFLUENT	Flow MGD	O&G µg/L	CN- µg/L	Zn µg/L	Cd µg/L	Cr µg/L	Ag µg/L	Cu µg/L	Mo µg/L	Ni µg/L	Pb µg/L	As µg/L	Se µg/L	Hg µg/L	Phenol µg/L	Sb µg/L	Be µg/L	Tl µg/L	Mn µg/L	Ba µg/L	B mg/L
EPA Test Method Used		1004 Rev. B 2010	SM 4500 C&E 2010/E-2011	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	1631E	420.1	200.8	200.8	200.8	200.7	200.7	200.7
Detection Level Achieved		5000	0.8	20	0.5	10	0.5	0.5	8	0.5	0.5	0.5	5	0.0002	22	60	0.5	0.5	2	2	100
07/31/2017	1.68			120	< 0.5	< 10	< 0.5	22.0	< 8	2.4	0.65	3.20	< 5			< 60	< 0.5	< 0.5	330	20	200
09/07/2017	1.65	19700	< 0.8											0.0903	26.9						
Average	1.67	19700	< 0.8	120	< 0.5	< 10	< 0.5	22.0	< 8	2.4	0.65	3.20	< 5	0.0903	26.9	< 60	< 0.5	< 0.5	330	20	200
Maximum	1.68	19700	< 0.8	120	< 0.5	< 10	< 0.5	22.0	< 8	2.4	0.65	3.20	< 5	0.0903	26.9	< 60	< 0.5	< 0.5	330	20	200
Minimum	1.65	19700	< 0.8	120	< 0.5	< 10	< 0.5	22.0	< 8	2.4	0.65	3.20	< 5	0.0903	26.9	< 60	< 0.5	< 0.5	330	20	200
Headworks limit			90.00	360	9.0	260.0	180.0	270		160	50	14	10	0.2							

Comments: None

**MONITORING RESULTS FOR THE ANNUAL PRETREATMENT REPORT
REPORTING YEAR: JANUARY 1, 2017 TO DECEMBER 31, 2017**

TREATMENT PLANT: CITY OF LITTLE ROCK -LITTLE MAUMELLE WATER RECLAMATION FACILITY

NPDES PERMIT NO.: AR0050849

AVERAGE POTW FLOW: 2.25 MGD

PERCENT (%) IU FLOW: 0 %

FINAL EFFLUENT	Flow MGD	O&G µg/L	CN- µg/L	Zn µg/L	Cd µg/L	Cr µg/L	Ag µg/L	Cu µg/L	Mo µg/L	Ni µg/L	Pb µg/L	As µg/L	Se µg/L	Hg µg/L	Phenol µg/L	Sb µg/L	Be µg/L	Tl µg/L	Mn µg/L	Ba µg/L	B µg/L
EPA Test Method Used		1664Rev B 2010	SM 4500 C&E 2010/E-2011	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	200.8	1631E	420.1	200.8	200.8	200.8	200.7	200.7	200.7
Detection Level Achieved		5000	0.8	20	0.5	10	0.5	0.5	8	0.5	0.5	0.5	5	0.0002	2.2	60	0.5	0.5	2	2	100
08/02/2017	2.32			57 <	0.5 <	10 <	0.5	5.6 <	8	2.1 <	0.50	0.93 <	5		<	60 <	0.5 <	0.5	64	4.9	190
09/07/2017	1.64	9700	1.7											0.0048	8.1						
Average	1.98	9700	1.7	57 <	0.5 <	10 <	0.5	5.6 <	8	2.1 <	0.50	0.93 <	5	0.0048	8.1 <	60 <	0.5 <	0.5	64	4.9	190
Maximum	2.32	9700	1.7	57 <	0.5 <	10 <	0.5	5.6 <	8	2.1 <	0.50	0.93 <	5	0.0048	8.1 <	60 <	0.5 <	0.5	64	4.9	190
Minimum	1.64	9700	1.7	57 <	0.5 <	10 <	0.5	5.6 <	8	2.1 <	0.50	0.93 <	5	0.0048	8.1 <	60 <	0.5 <	0.5	64	4.9	190
WQS Effluent Level			n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a							
Day Max.																					
Month Avg.																					

Comments: None

**MONITORING RESULTS FOR THE ANNUAL PRETREATMENT REPORT
TREATMENT PLANT PERCENT REMOVAL EFFICIENCIES
REPORTING YEAR: JANUARY 1, 2017 TO DECEMBER 31, 2017**

Little Maumelle Water Reclamation Facility - NPDES Permit No. AR0050849

	Q&G	CN-	Zn	Cd	Cr	Ag	Cu	Mo	Ni	Pb	As	Se	Hg	Phenol	Sb	Be	Tl	Mn	Ba	B
07/31/2017			52.5%	0.0%	0.0%	0.0%	74.5%	0.0%	12.5%	23.1%	70.9%	0.0%			0.0%	0.0%	0.0%	80.6%	75.5%	5.0%
09/07/2017	50.8%	-112.5%											94.7%	69.9%						
Average	50.8%	-112.5%	52.5%	0.0%	0.0%	0.0%	74.5%	0.0%	12.5%	23.1%	70.9%	0.0%	94.7%	69.9%	0.0%	0.0%	0.0%	80.6%	75.5%	5.0%

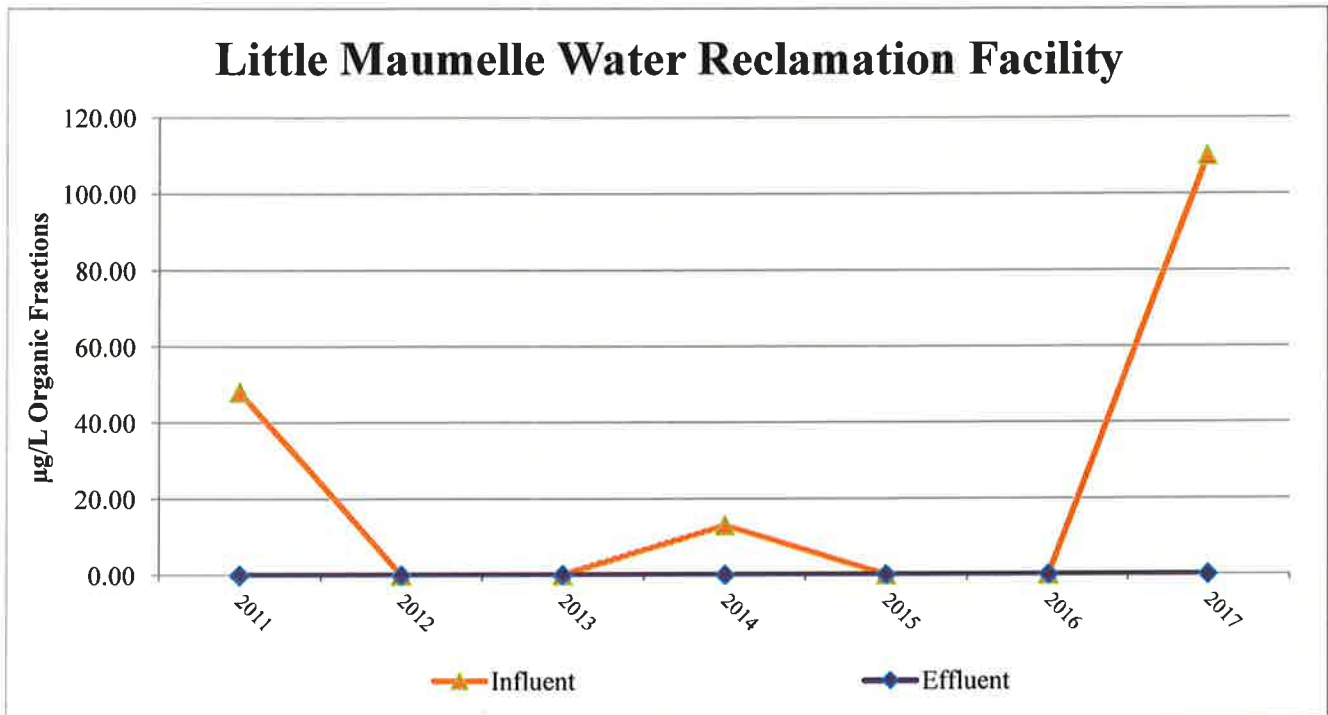
I. 2017 INFLUENT / EFFLUENT POSITIVE RESULTS, µg/L

LITTLE MAUMELLE WATER RECLAMATION FACILITY		
Sample Date	Compound	Influent
9/19/2017	Volatiles (toluene)	110
	Base/Neutral, Acid Compounds, Pesticides/PCBs, Chlorpyrifos	ND
12/11/2017	BTEX (toluene retest)	ND

Sample Date	Compound	Effluent
9/19/2017	Volatiles	ND
	Base/Neutral, Acid Compounds, Pesticides/PCBs, Chlorpyrifos	ND

Comments: ND - No Detection

II. TREND OF POSITIVE RESULTS - REPORTING PERIOD 2011 THROUGH 2017

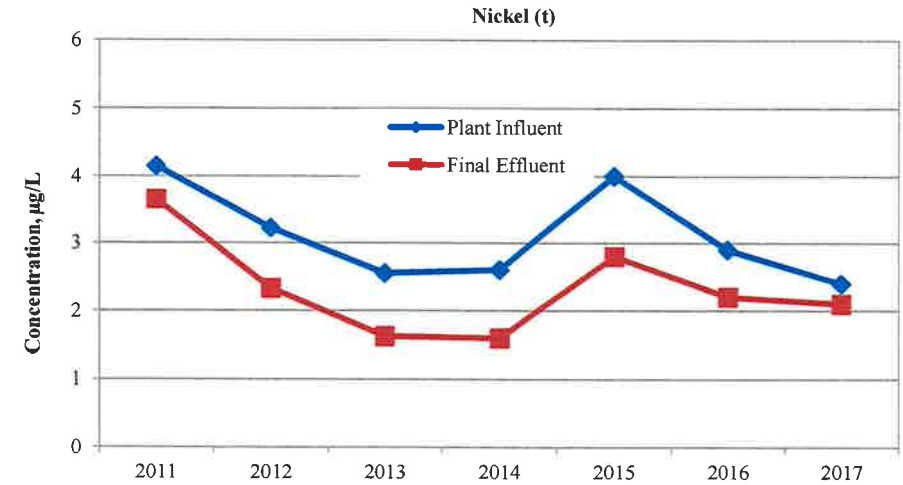
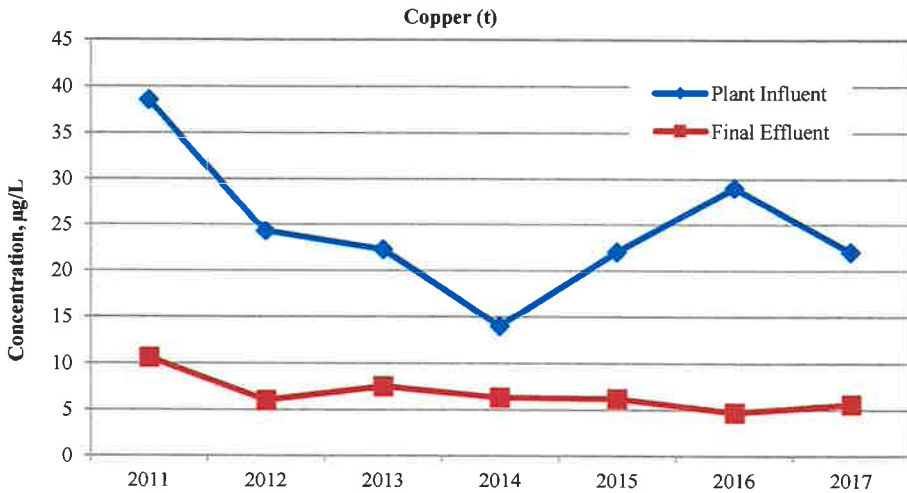
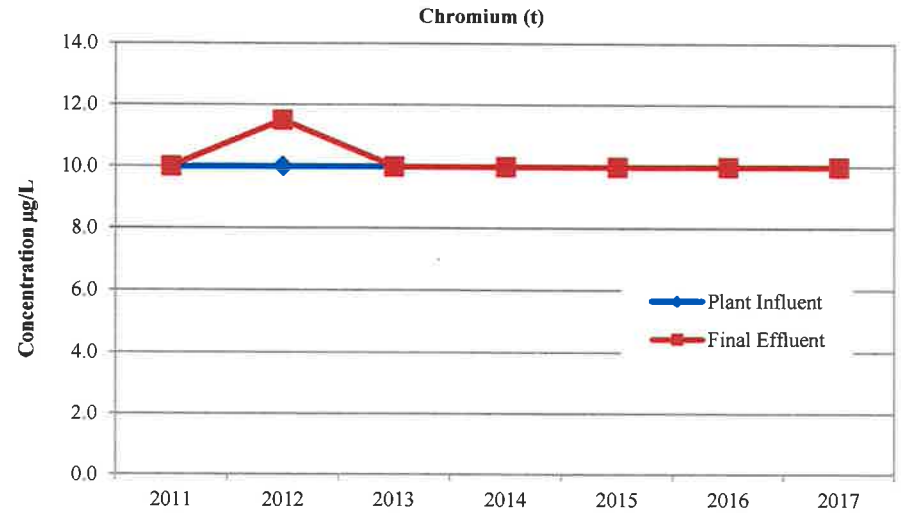
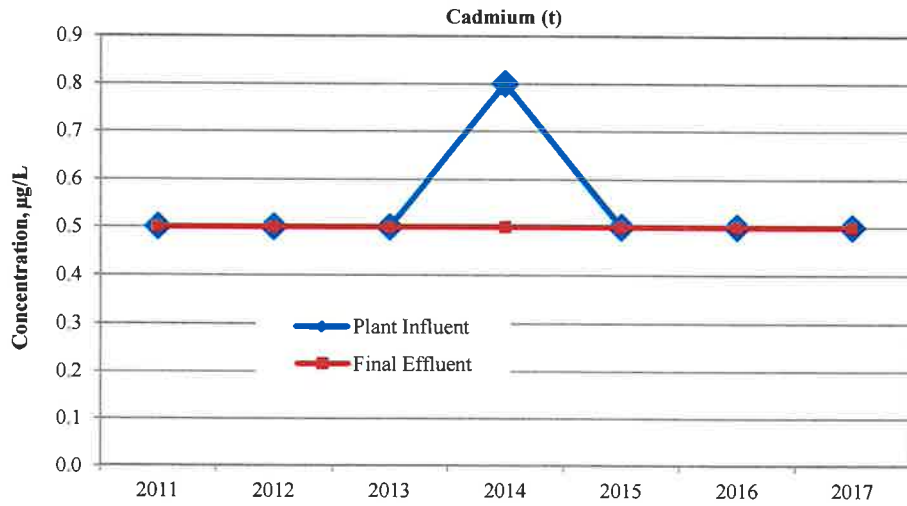


III. SUMMARY OF POSITIVE RESULTS - REPORTING PERIOD 2011 THROUGH 2017

Little Maumelle Water Reclamation Facility

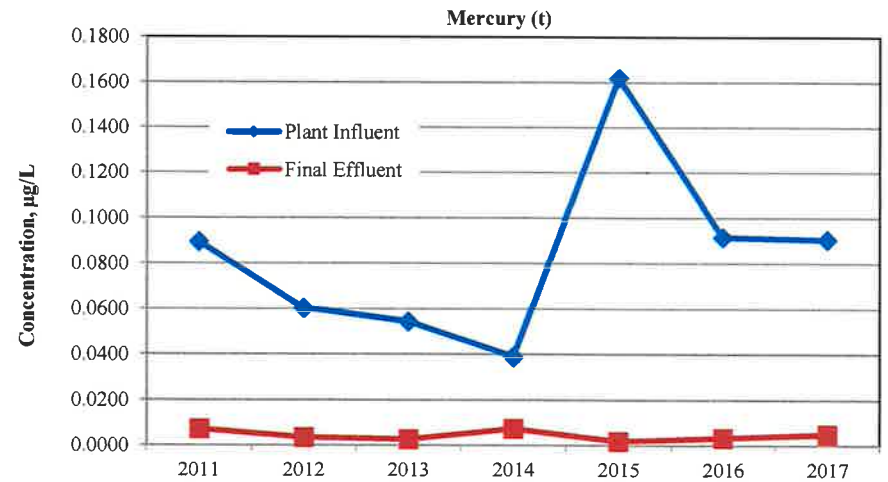
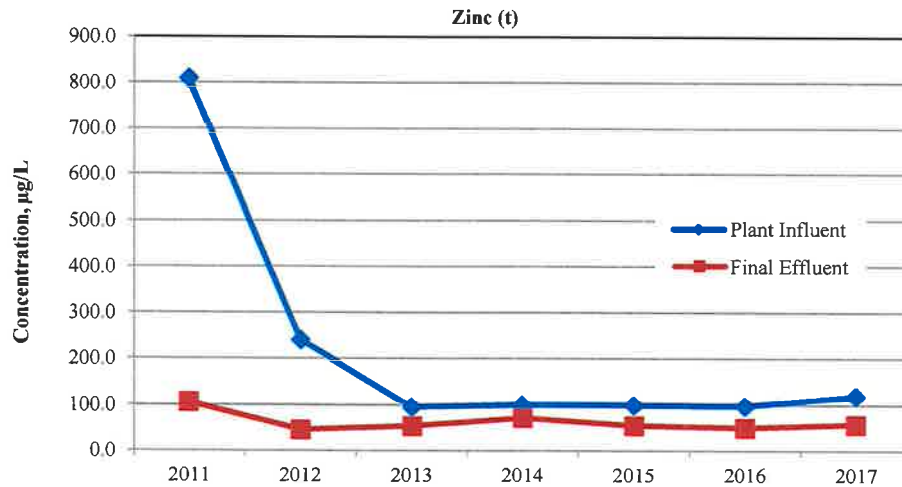
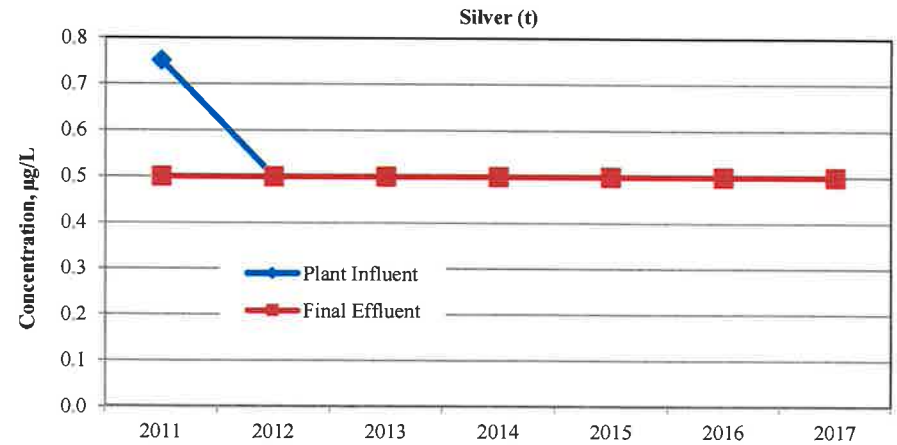
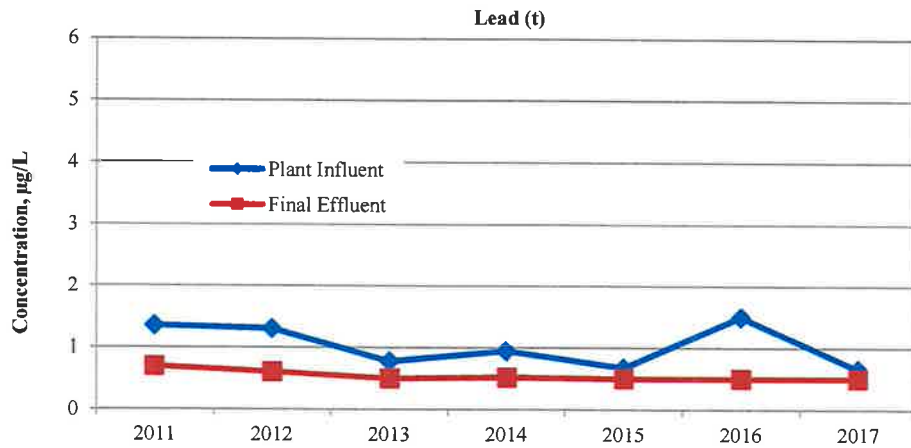
PPS, µg/L	2011		2012		2013		2014		2015		2016	
Parameter	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF
Toluene	37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl)Phthalate	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND
Diethylphthalate	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total	48.00	0.00	0.00	0.00	0.00	0.00	13.00	0.00	0.00	0.00	0.00	0.00

**LITTLE ROCK WATER RECLAMATION AUTHORITY
 ENVIRONMENTAL ASSESSMENT DEPARTMENT
 LITTLE MAUMELLE WATER RECLAMATION FACILITY CONCENTRATION TRENDS
 2011 THROUGH 2017**



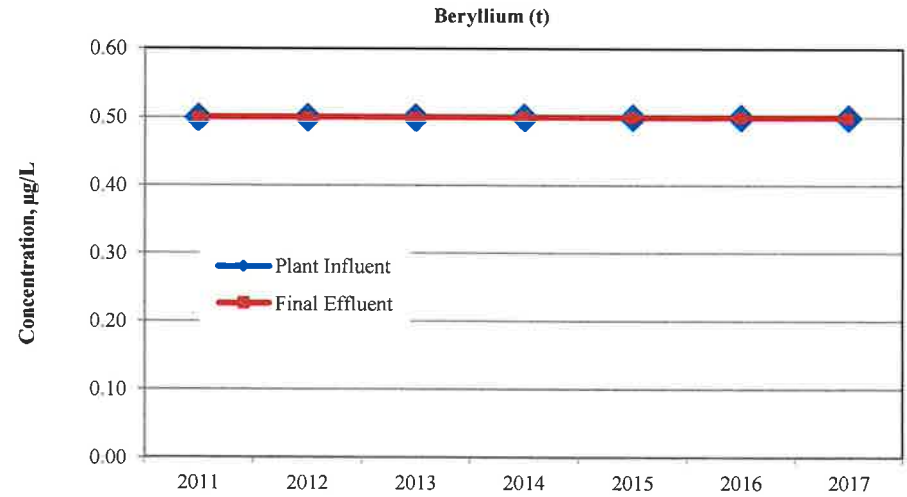
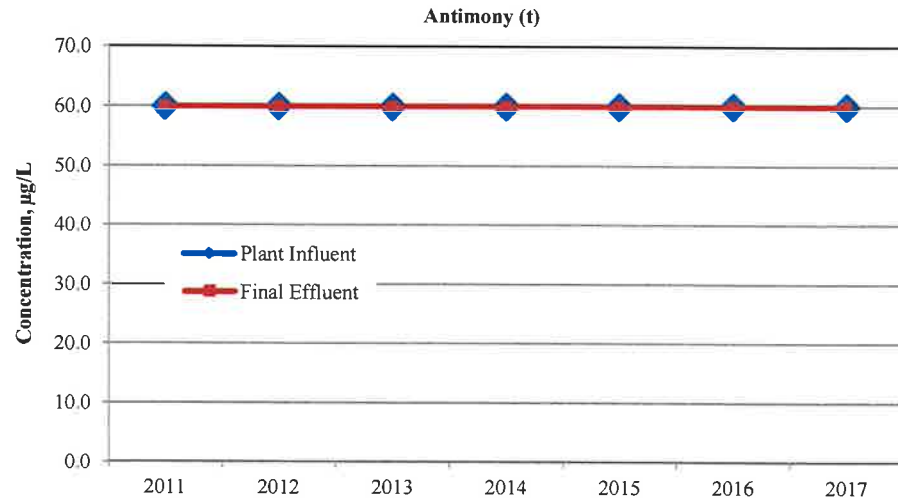
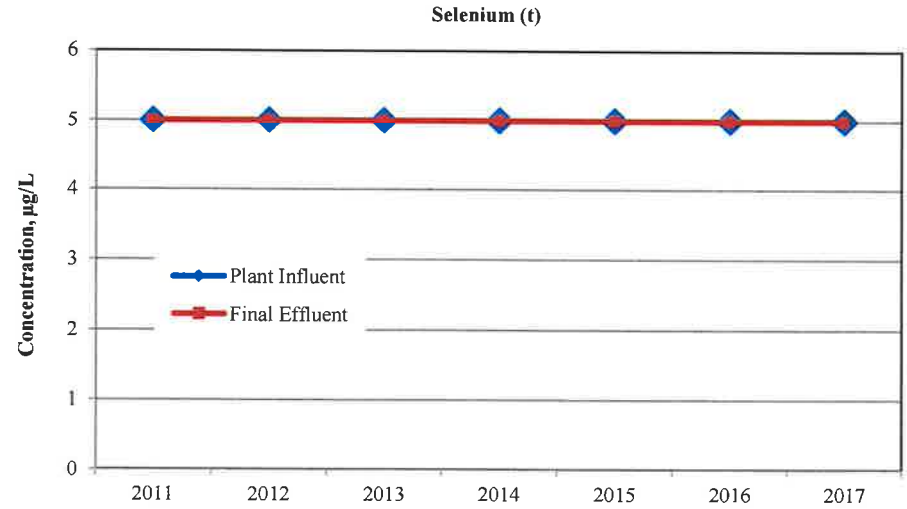
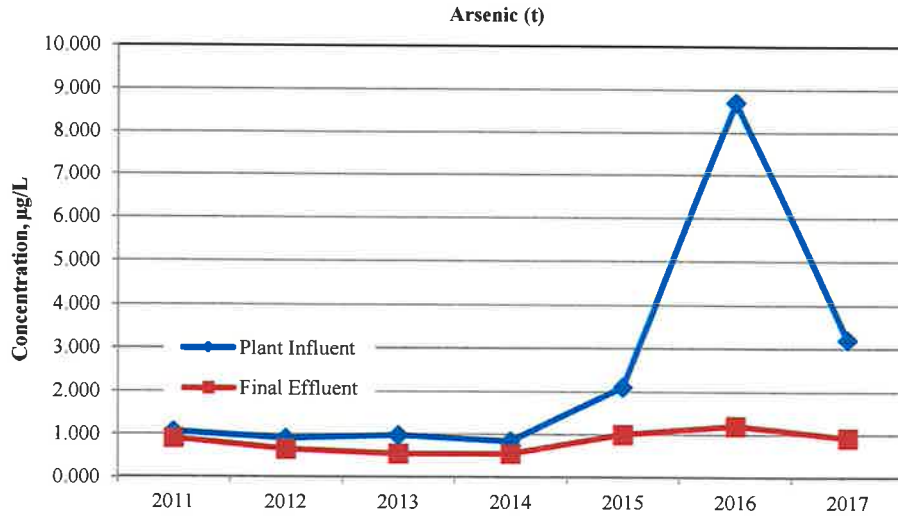
	Cadmium(t)	Copper (t)	Chromium (t)	Nickel(t)
Influent Headworks Limit	9 ug/L	270 ug/L	260 ug/L	160 ug/L
Effluent Water Quality Criteria (Acute)	N/A	N/A	N/A	N/A

**LITTLE ROCK WATER RECLAMATION AUTHORITY
 ENVIRONMENTAL ASSESSMENT DEPARTMENT
 LITTLE MAUMELLE WATER RECLAMATION FACILITY CONCENTRATION TRENDS
 2011 THROUGH 2017**



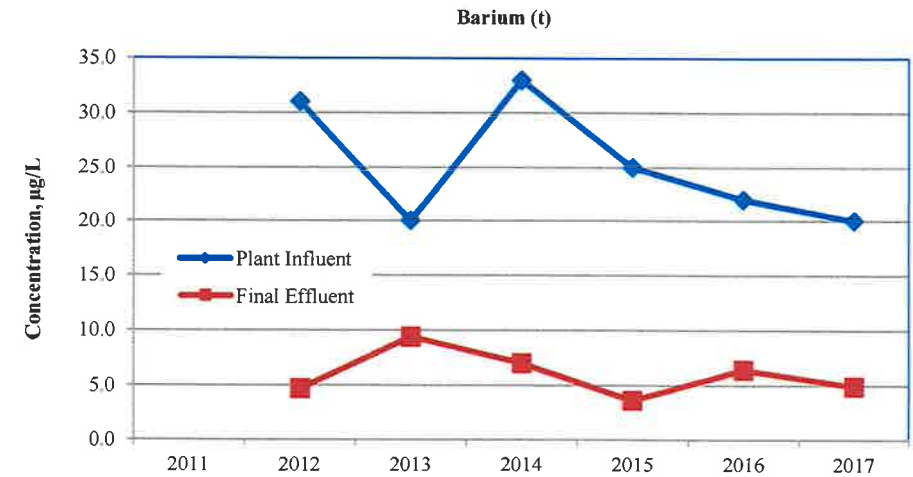
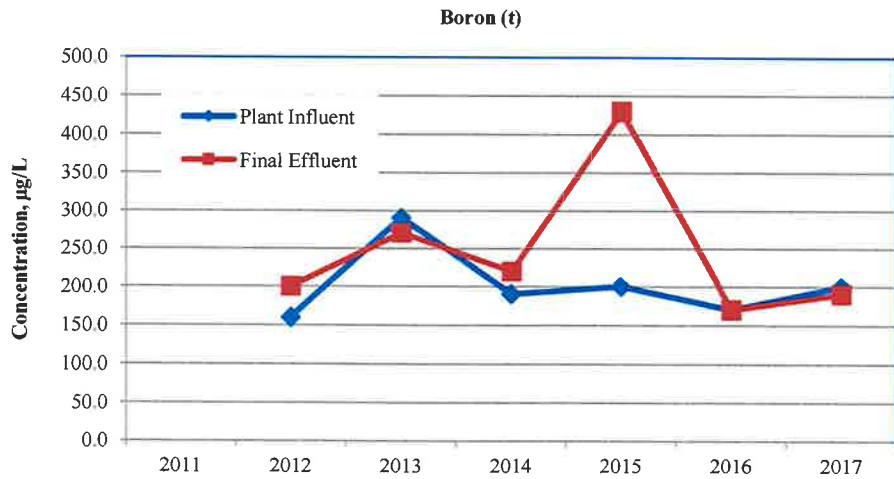
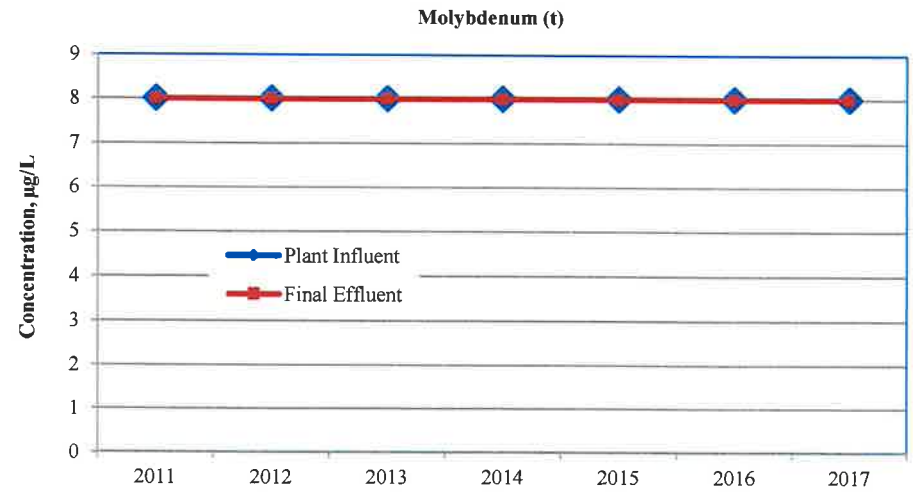
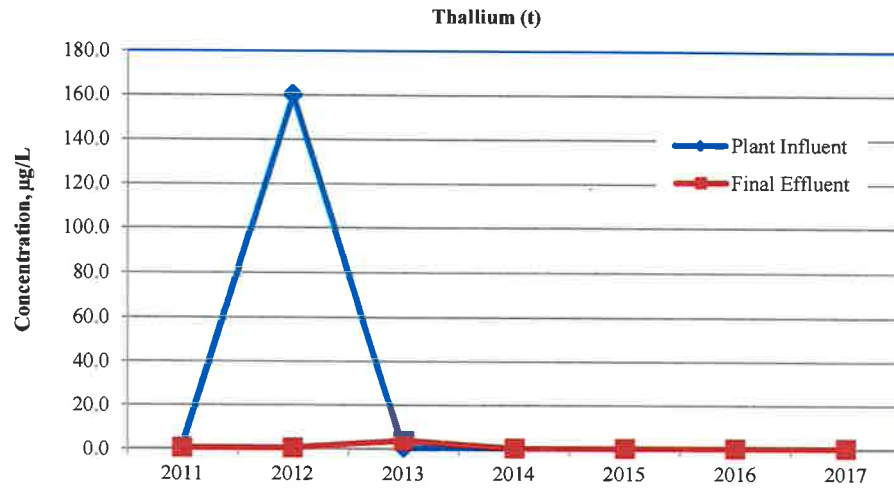
	Lead (t)	Zinc(t)	Silver(t)	Mercury(t)
Influent Headworks Limit	50 ug/L	360 ug/L	180 ug/L	0.2 ug/L
Effluent Water Quality Criteria (Acute)	N/A	N/A	N/A	N/A

**LITTLE ROCK WATER RECLAMATION AUTHORITY
 ENVIRONMENTAL ASSESSMENT DEPARTMENT
 LITTLE MAUMELLE WATER RECLAMATION FACILITY CONCENTRATION TRENDS
 2011 THROUGH 2017**

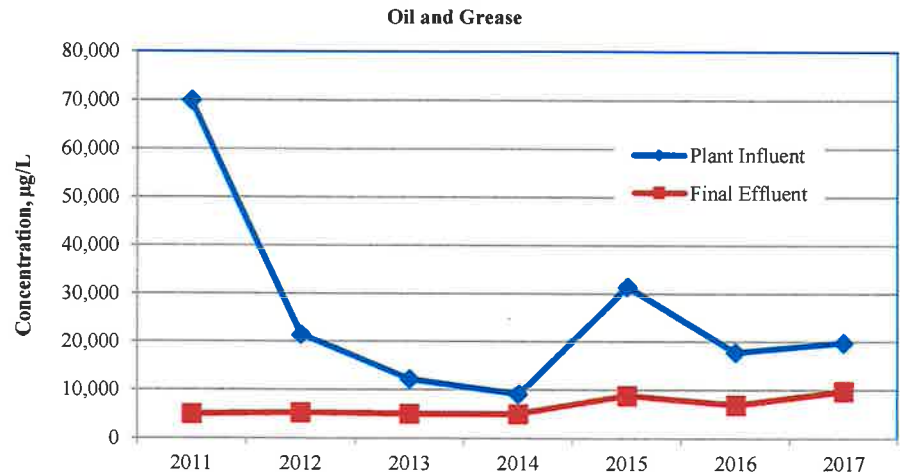
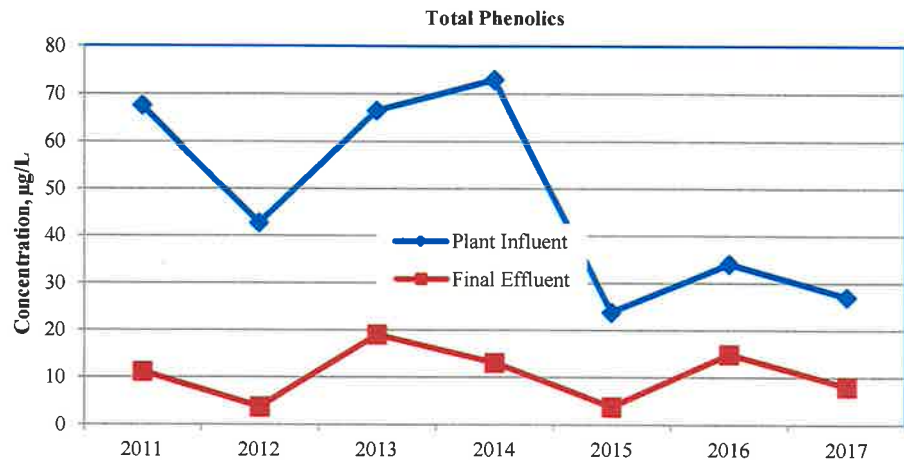
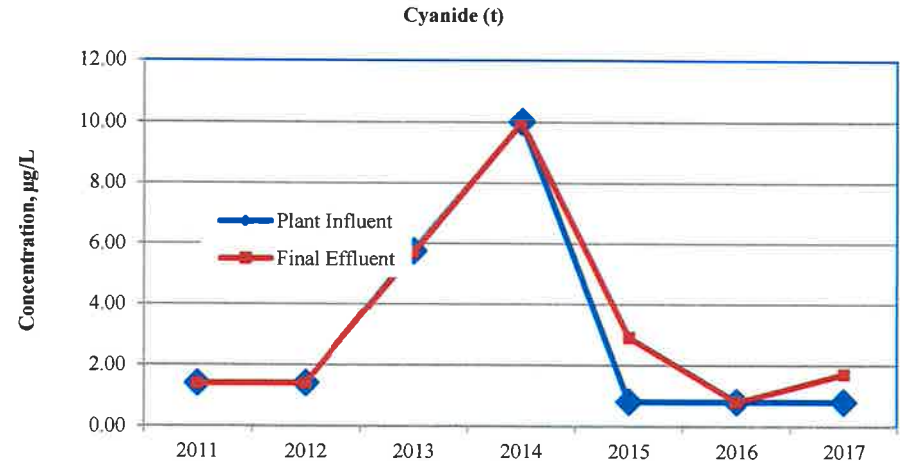
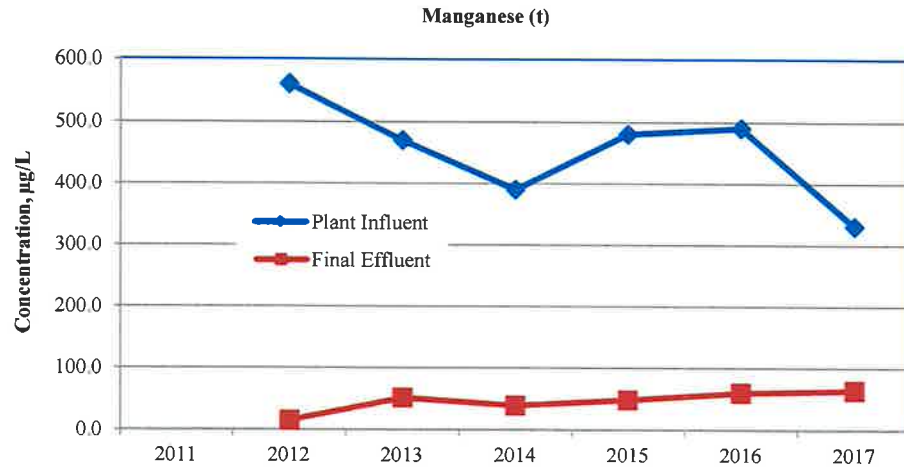


	Arsenic(t)	Antimony (t)	Selenium (t)	Beryllium (t)
Influent Headworks Limit	14 ug/L	None	10 ug/L	None
Effluent Water Quality Criteria (Acute)	N/A	N/A	N/A	N/A

**LITTLE ROCK WATER RECLAMATION AUTHORITY
 ENVIRONMENTAL ASSESSMENT DEPARTMENT
 LITTLE MAUMELLE WATER RECLAMATION FACILITY CONCENTRATION TRENDS
 2011 THROUGH 2017**



	Thallium (t)	Boron (t)	Molybdenum(t)	Barium(t)
Influent Headworks Limit	None	None	None	None
Effluent Water Quality Criteria (Acute)	N/A	N/A	N/A	N/A



	Manganese (t)	Total Phenols	Cyanide (t)	Oil&Grease
Influent Headworks Limit	None	None	90 ug/L	None
Effluent Water Quality Criteria (Acute)	N/A	N/A	N/A	N/A

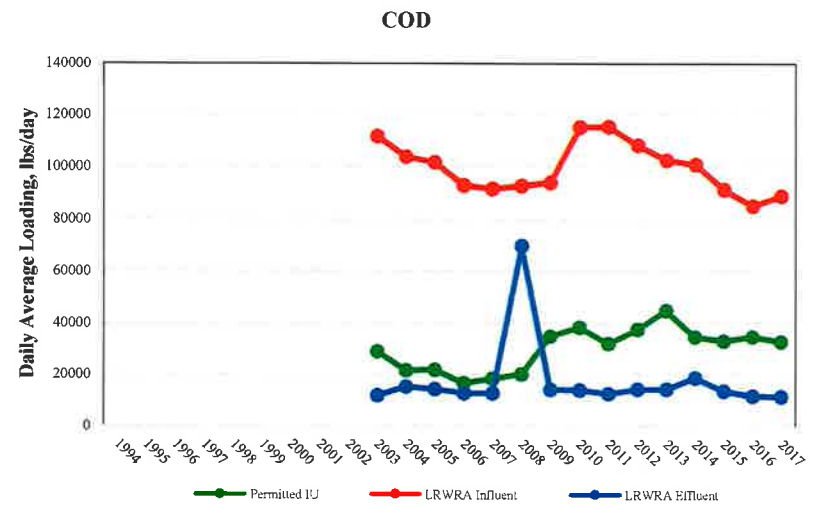
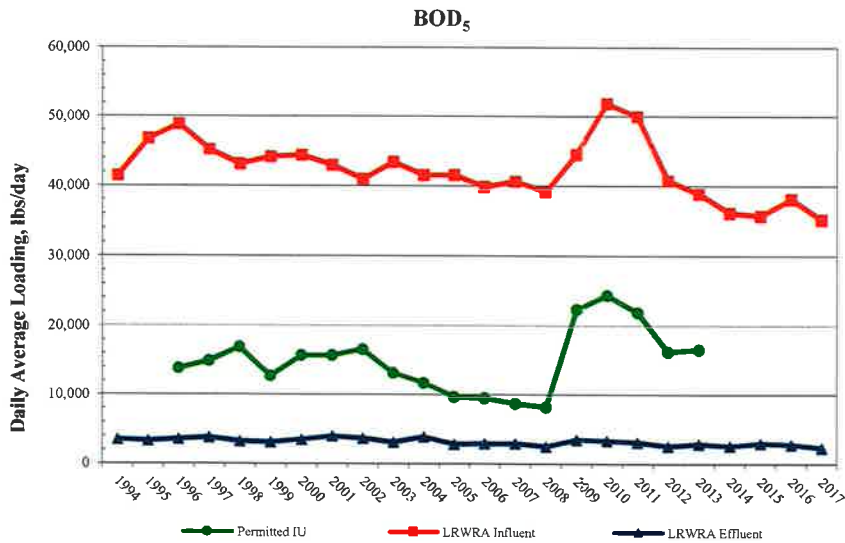
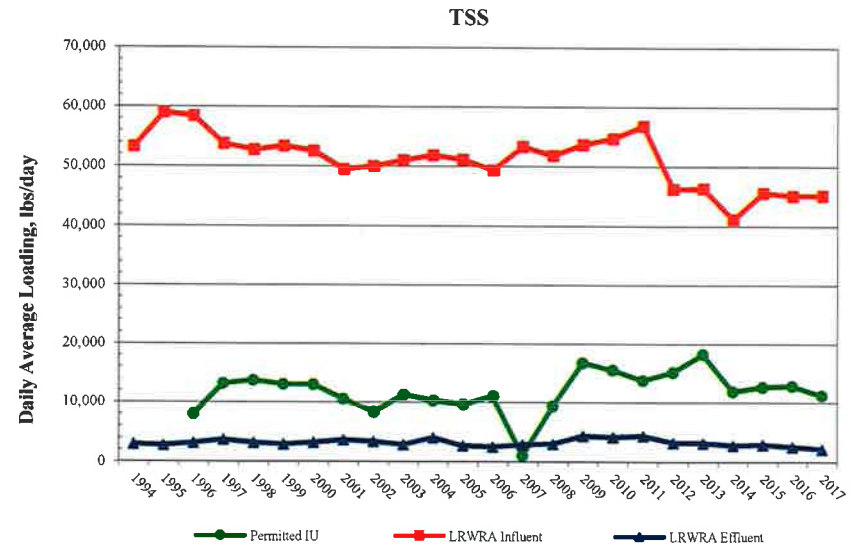
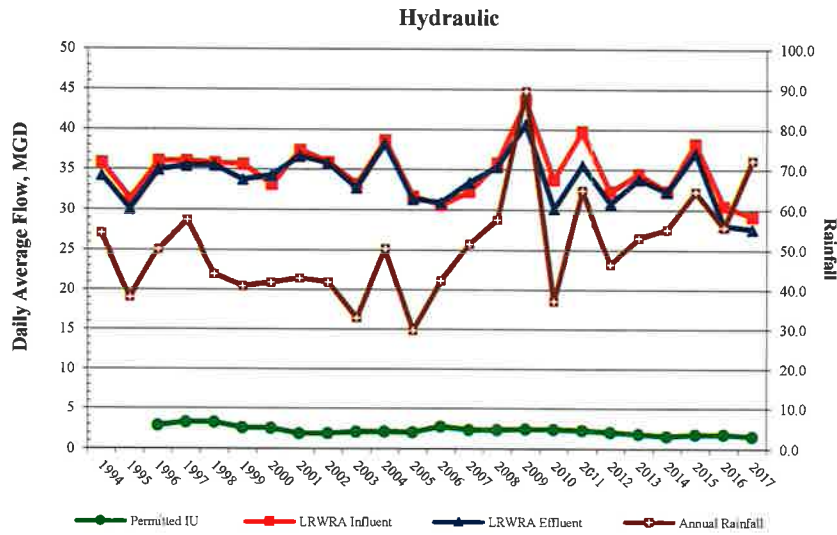
SUMMARY OF WATER RECLAMATION FACILITY LOADING TRENDS

Trend charts are used to evaluate pollutant loading for the Little Rock Water Reclamation Authority (LRWRA) system, for each wastewater treatment facility and to evaluate Industrial User (IU) contributions. Little Maumelle Water Reclamation Facility came on line in 2011 and is included on the charts beginning 2011. The charts are organized in the following order:

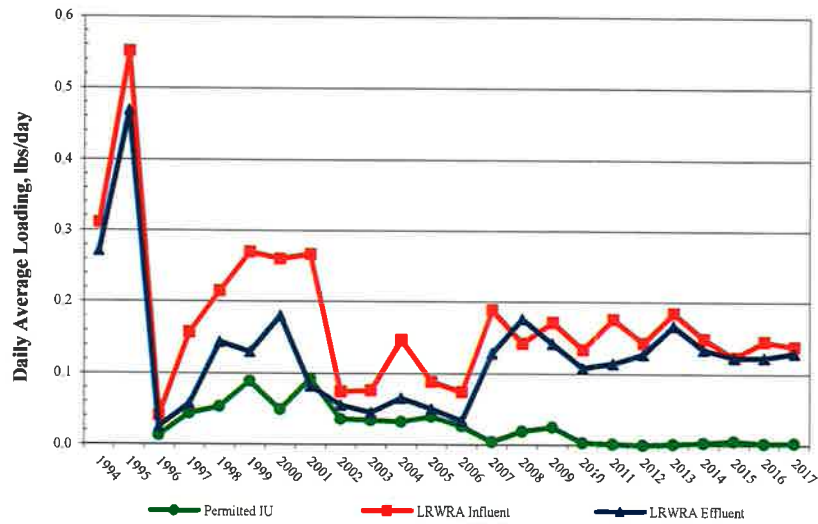
- Total System Loading Trends - These charts show 1994 – 2017 loading, lbs/day, for the total cumulative influent/effluent loading for the AF-WRF, FC-WRF, and LM-WRF. The cumulative loading from permitted IU's is also included. Parameters include flow, BOD, TSS, O&G and local limit pollutant parameters. The BOD trend does not include LM-WRF data since the NPDES Permit is for CBOD and the BOD trend ends in 2013 due to monitoring changes for surcharge parameters beginning 2014.

For each individual analytical point the lbs/day is calculated using the flow for each sample date. In cases where the concentration is reported as less than the detection limit the detection limit number was used to calculate the lbs/day. This causes the loading (lbs/day) to be higher than what it would be if zero values were used in those instances.

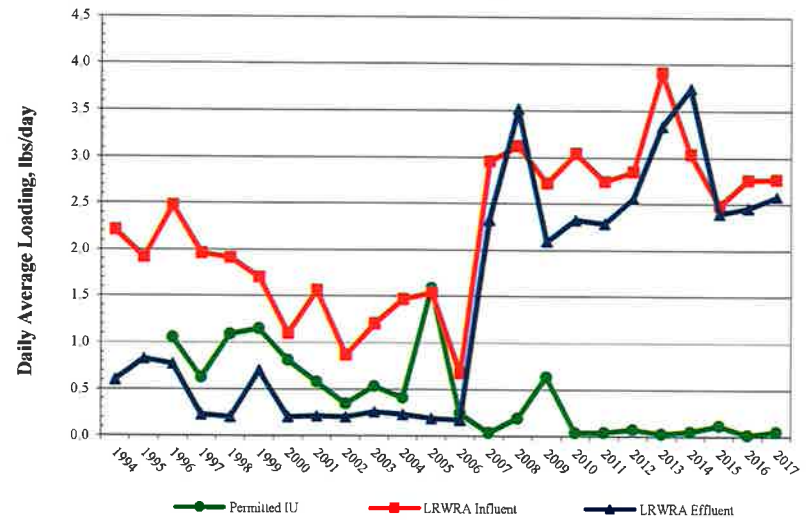
- IU Percent Contributions 1996 - 2017 - These charts show IU percent contributions to the LRWRA system starting 1996 to date. When test results (IU and LRWRA) are reported as less than detection or reporting limit, the detection limit value is used to total lbs calculations.
- POTW Loading Trends - Influent/Effluent Loading, lbs/day, comparison charts were developed for the AF-WTF and FC-WTF for 1994 - 2017. LM-WRF loading data (lbs/day) for 2011 - 2017 was added to the comparison charts (except for BOD). These charts reveal trends in loading for each treatment plant. (% removal efficiencies, based on wastewater treatment facility influent/effluent concentration values, can be found in Section IV, V, and VI, of this report.)



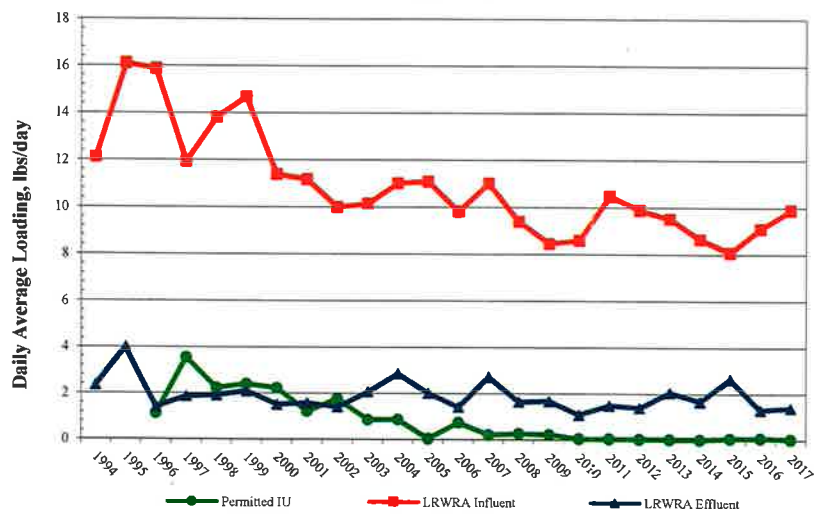
Cadmium (t)



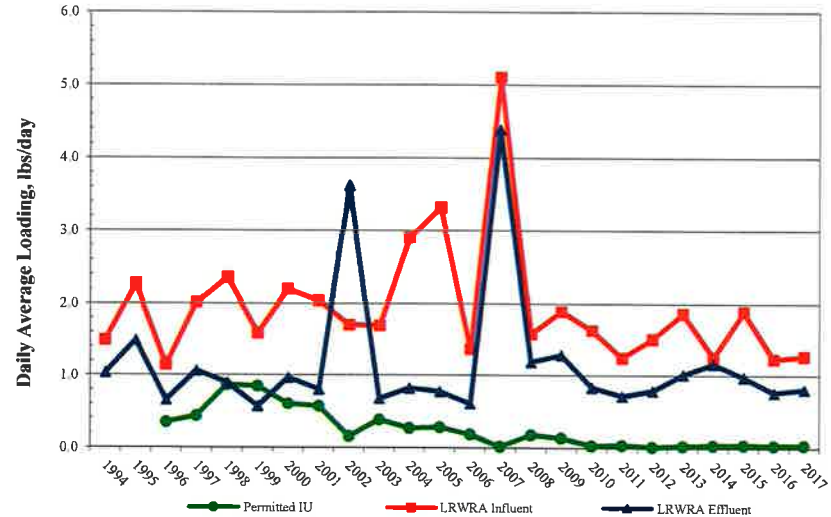
Chromium (t)



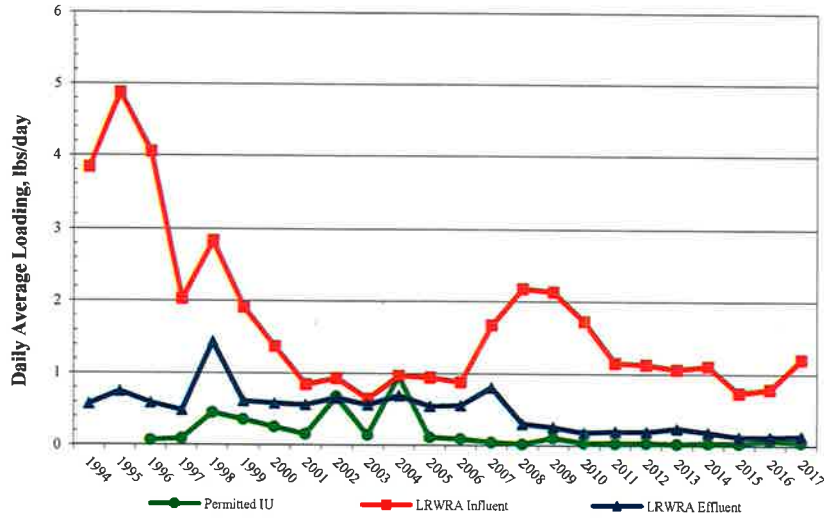
Copper (t)



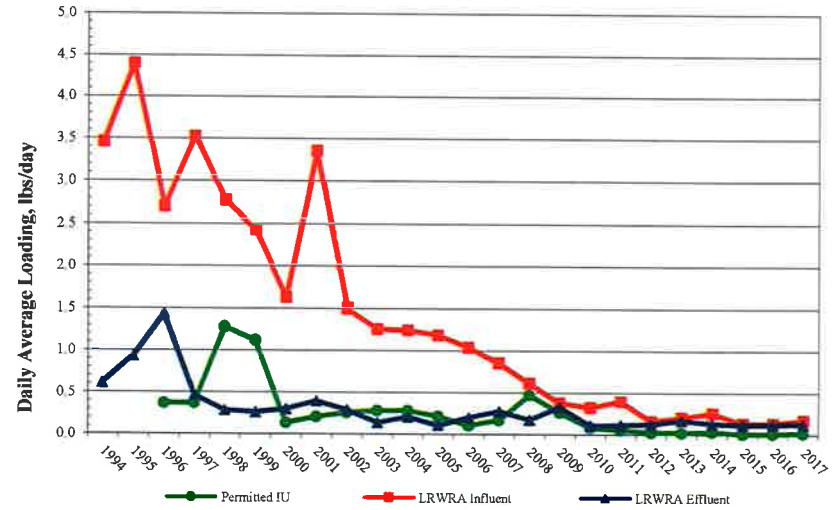
Nickel (t)



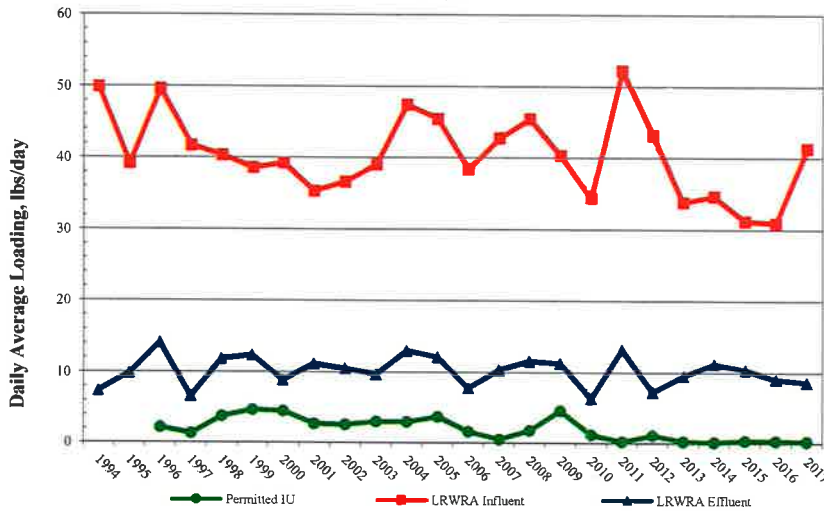
Lead (t)



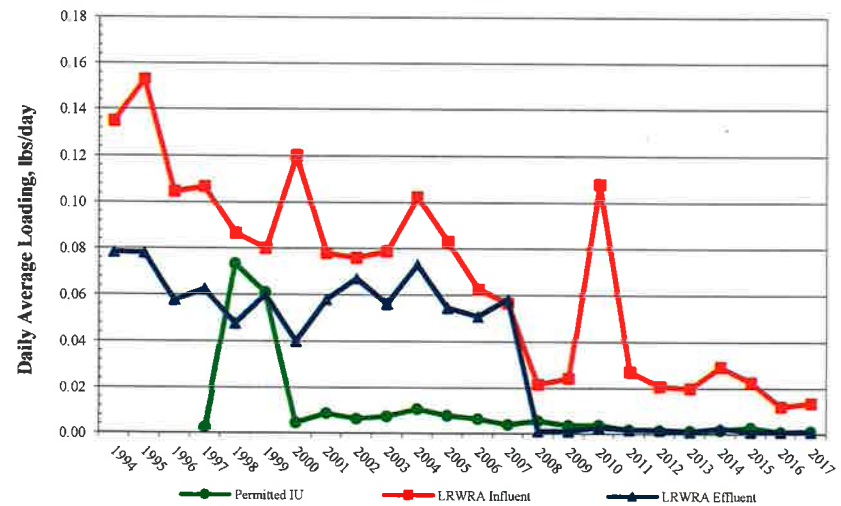
Silver (t)



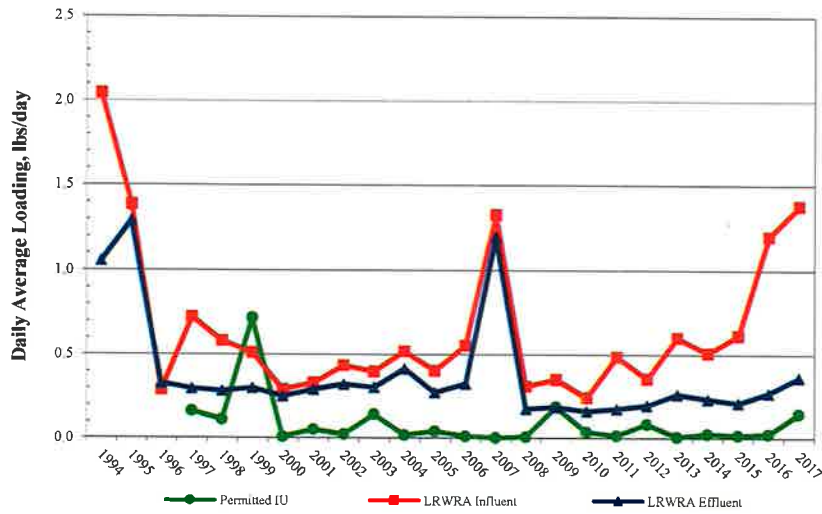
Zinc (t)



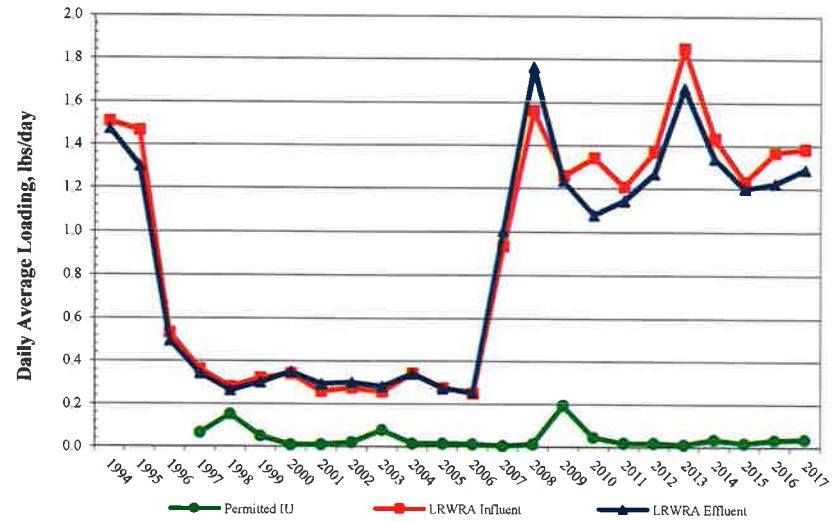
Mercury (t)



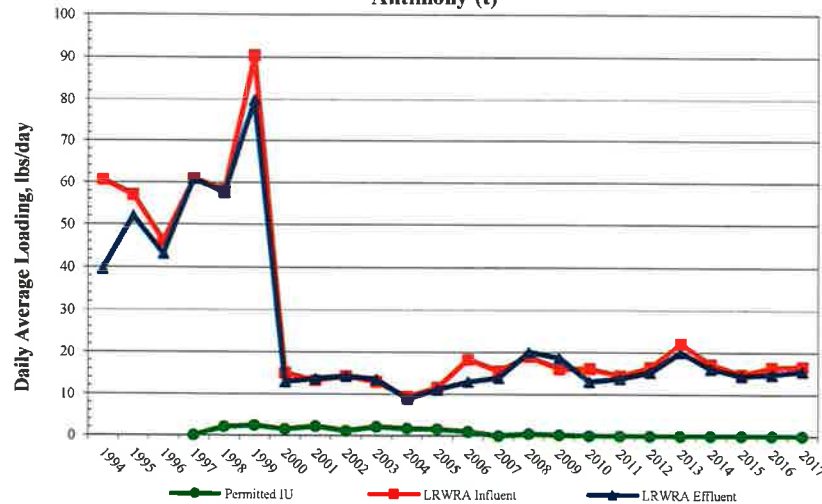
Arsenic (t)



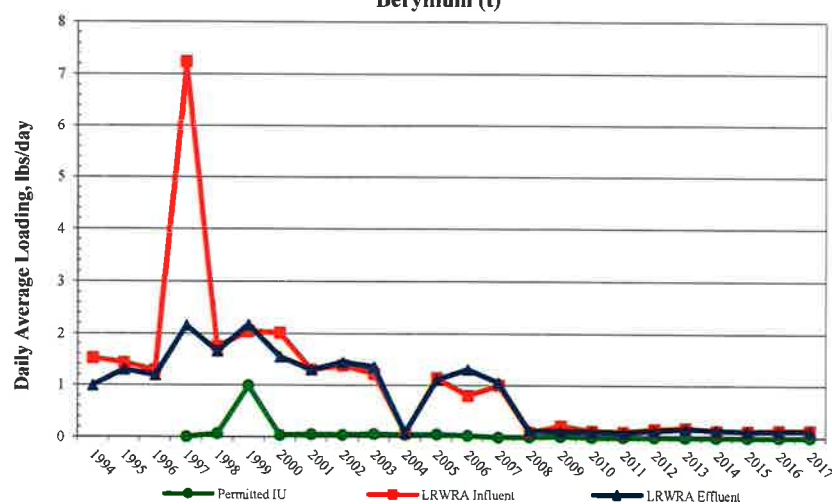
Selenium (t)



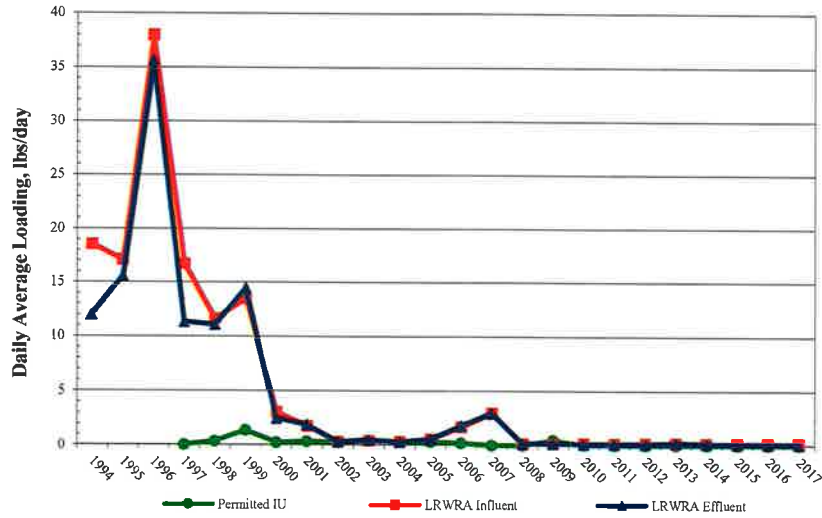
Antimony (t)



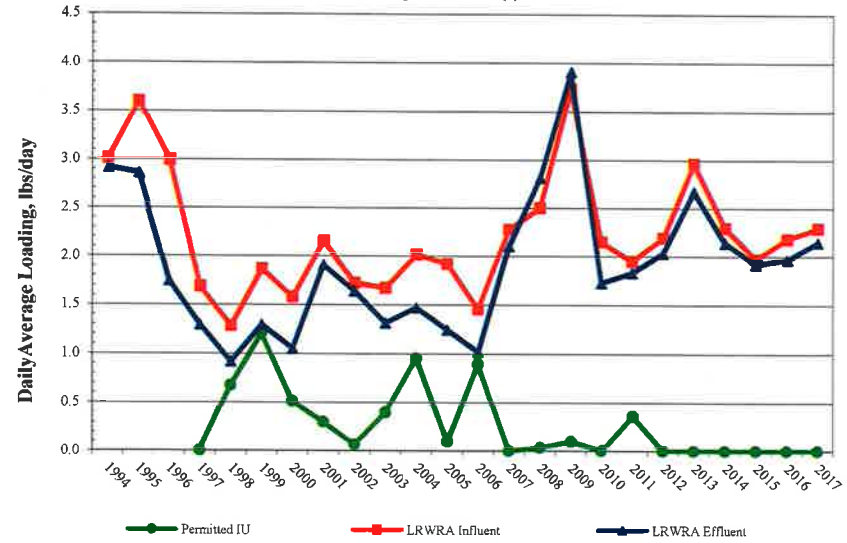
Beryllium (t)



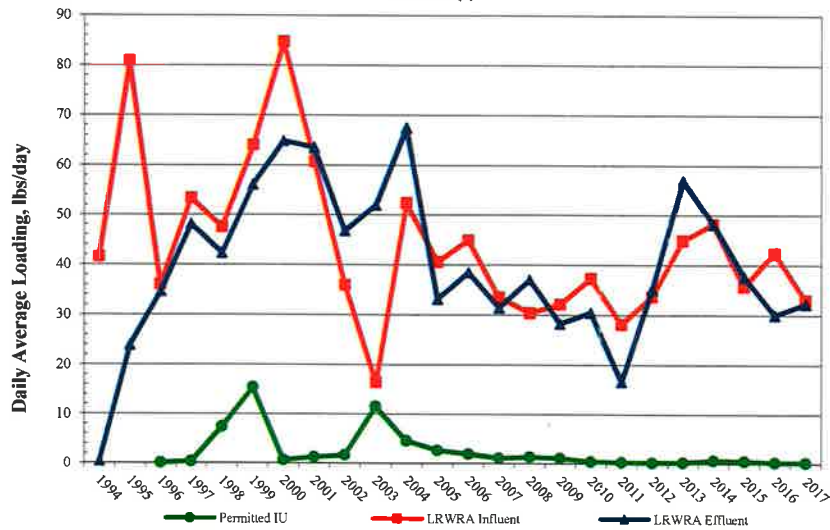
Thallium (t)



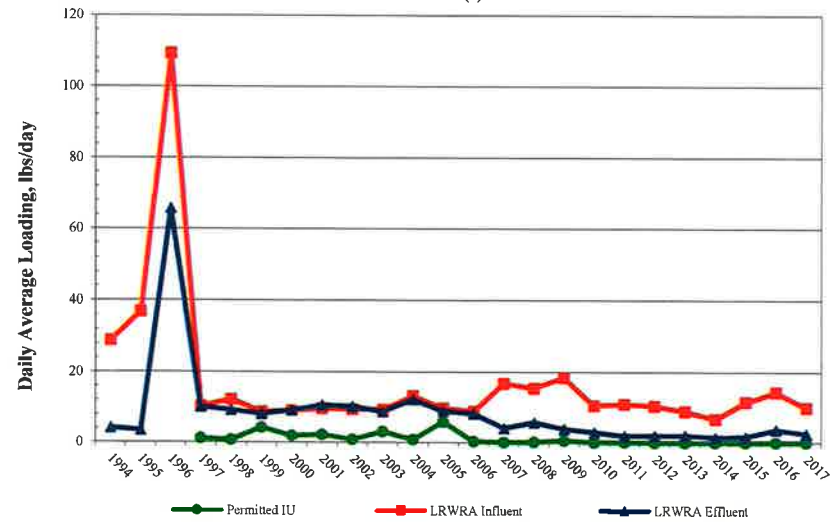
Molybdenum (t)

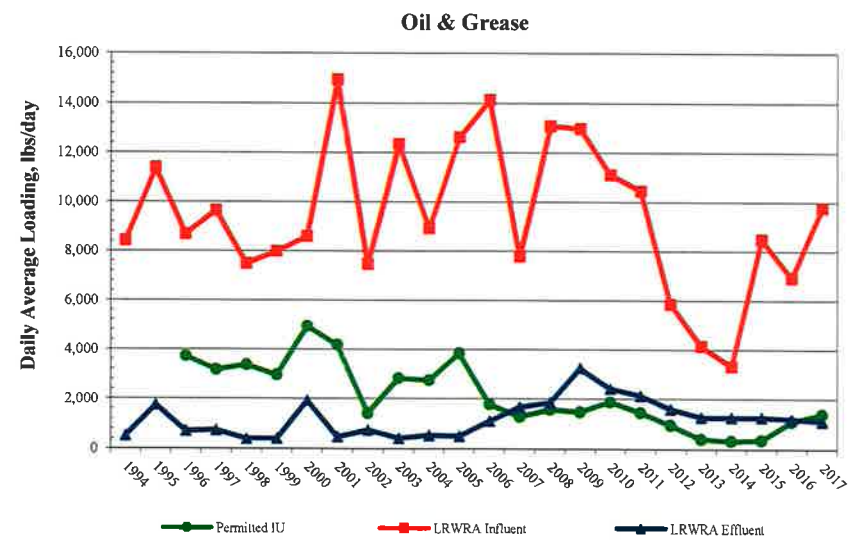
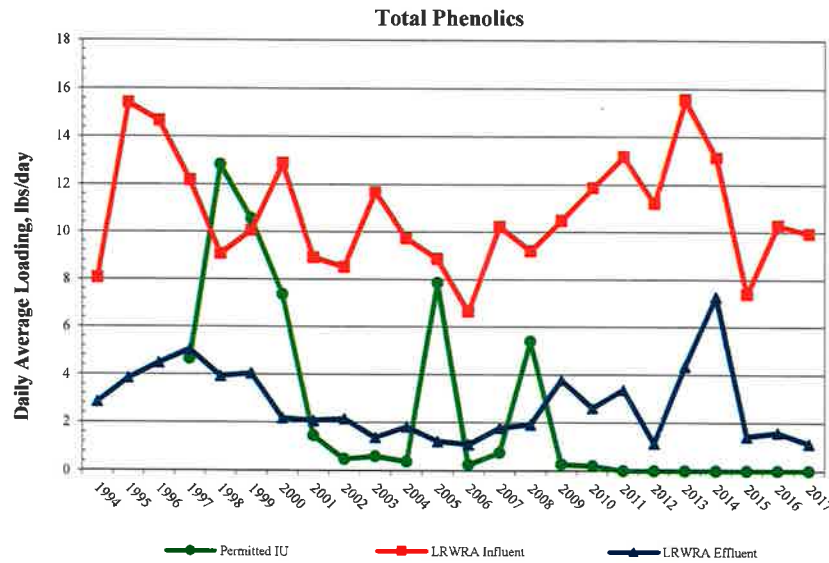
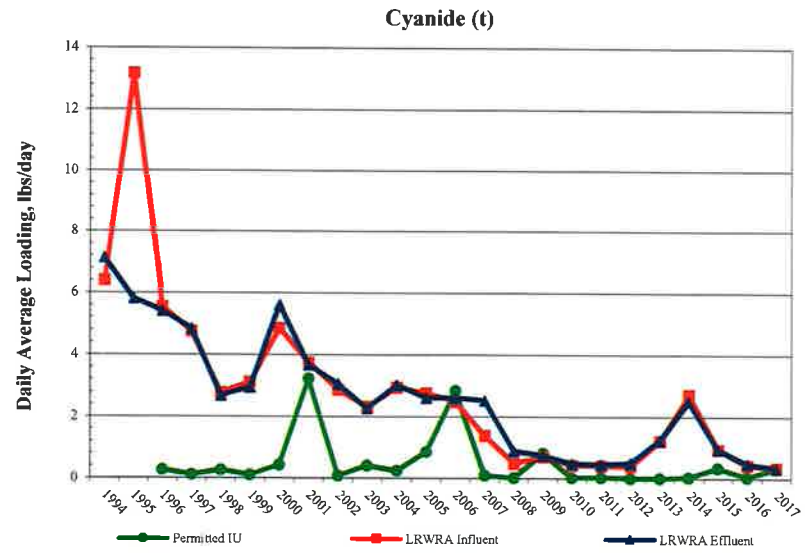
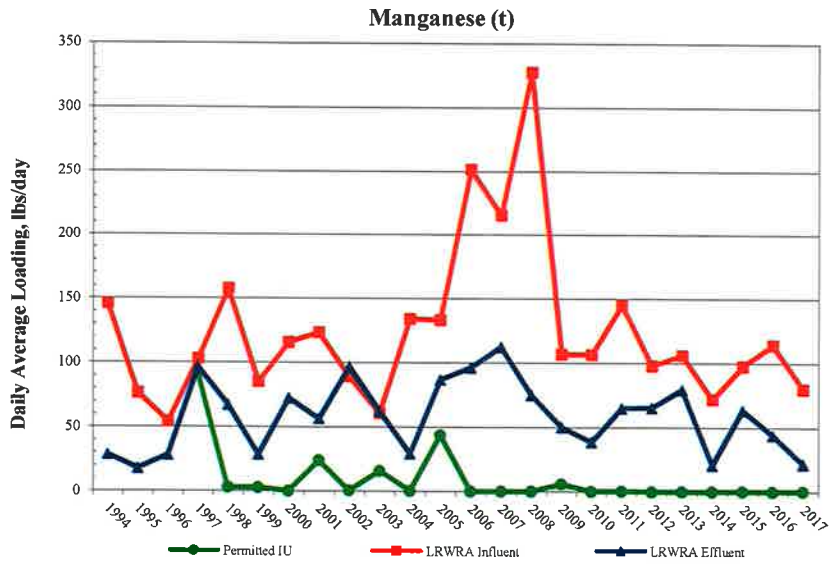


Boron (t)

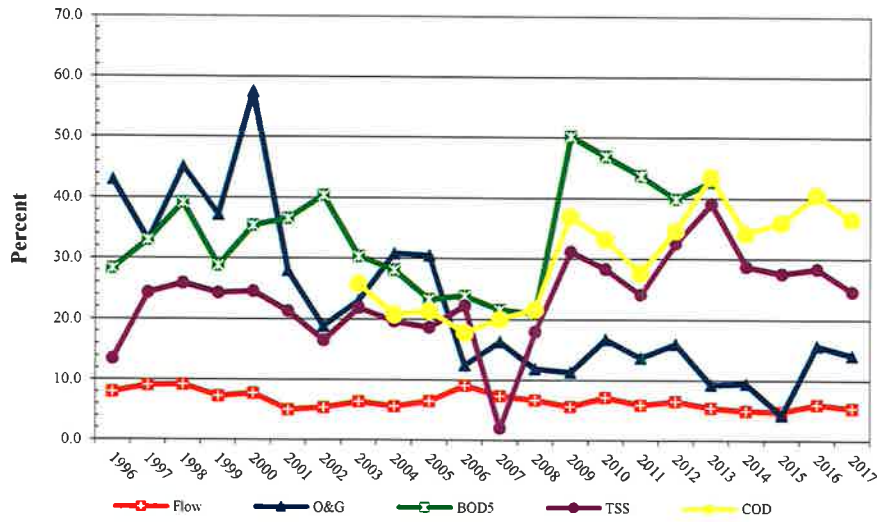


Barium (t)

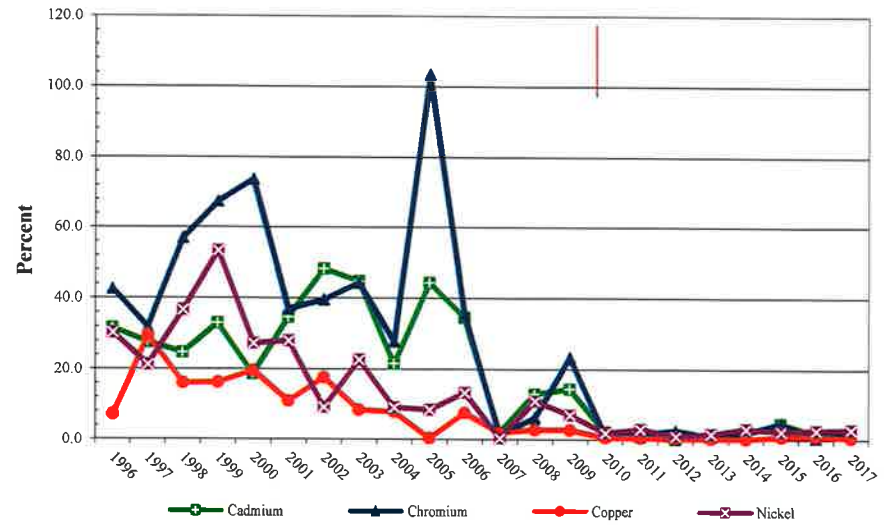




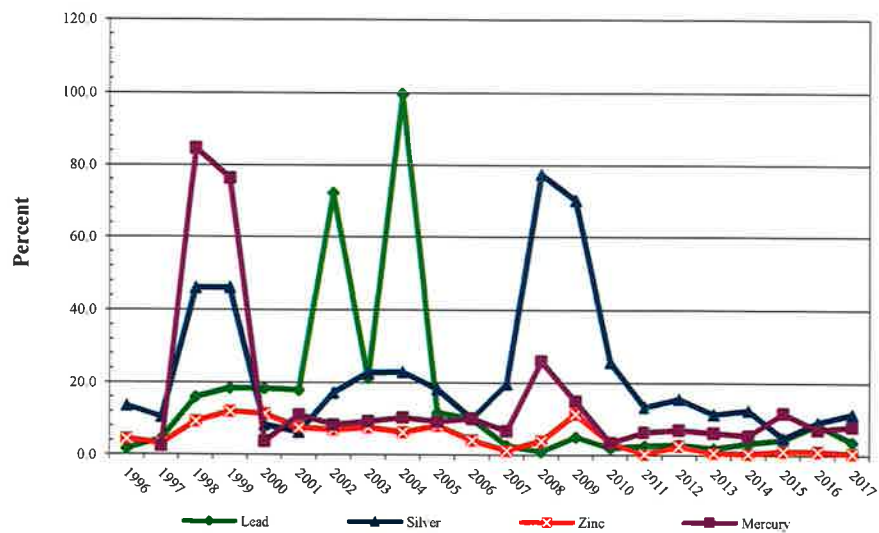
IU % Contributions



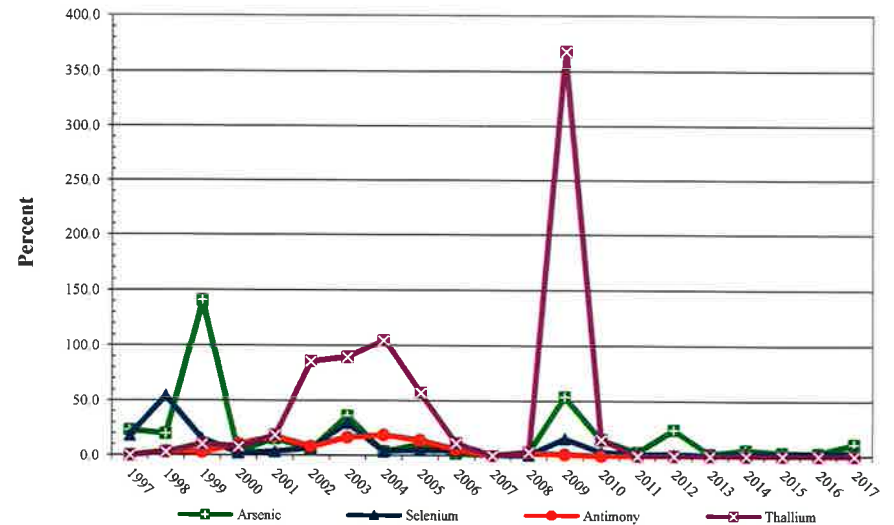
IU % Contributions



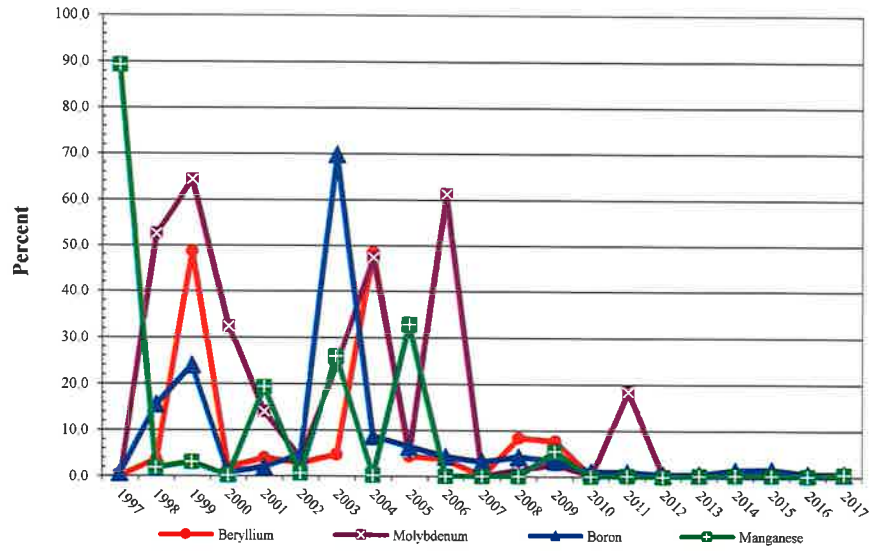
IU % Contributions



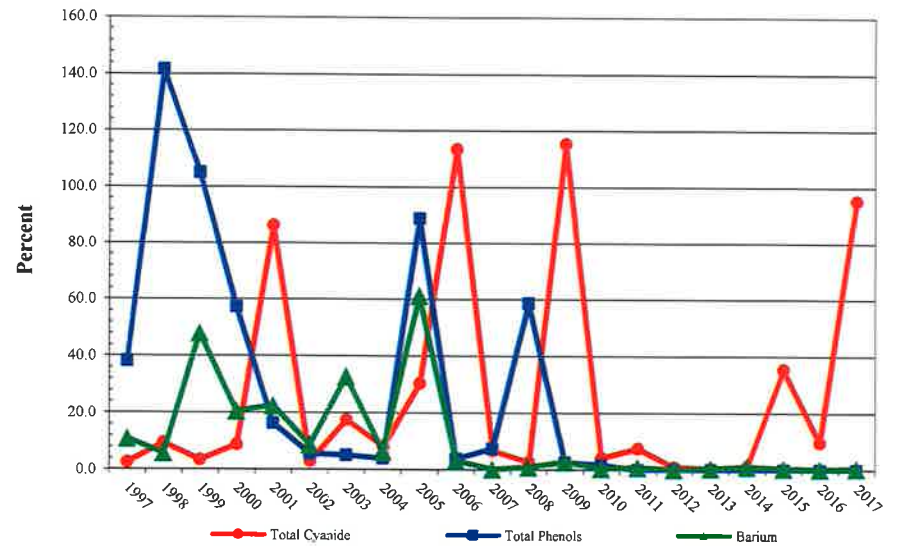
IU % Contributions



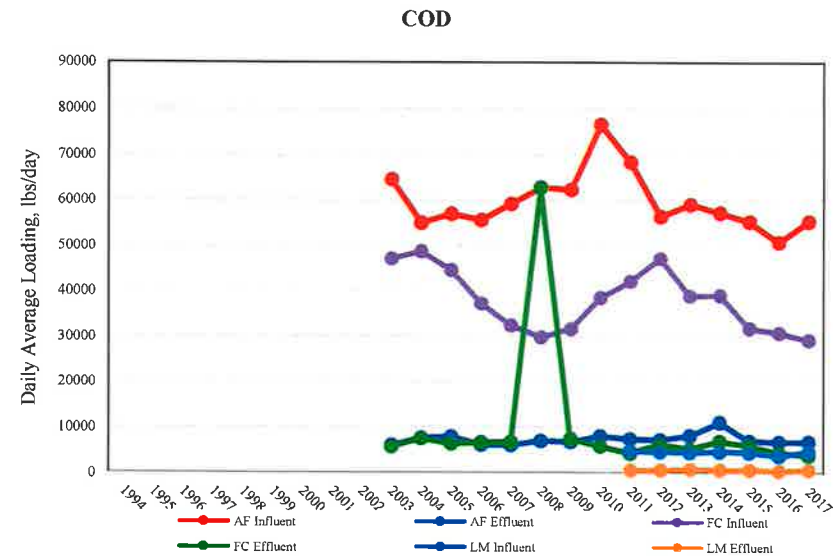
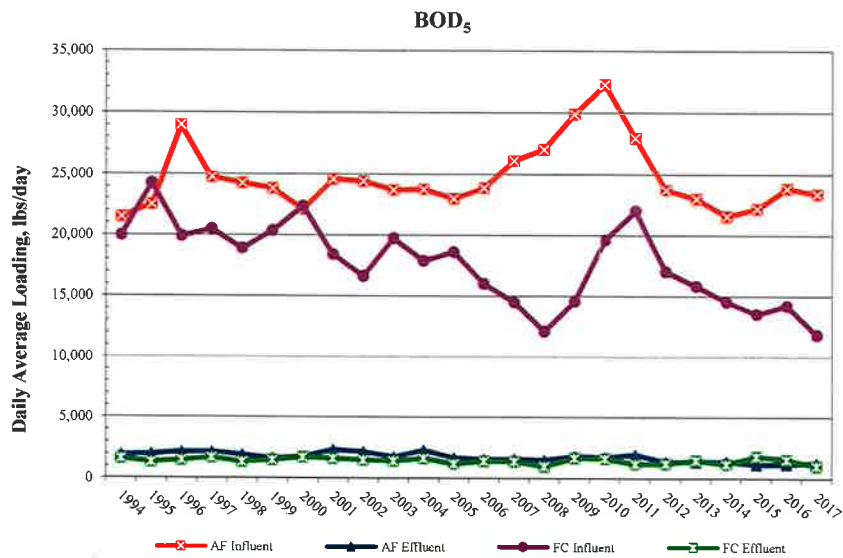
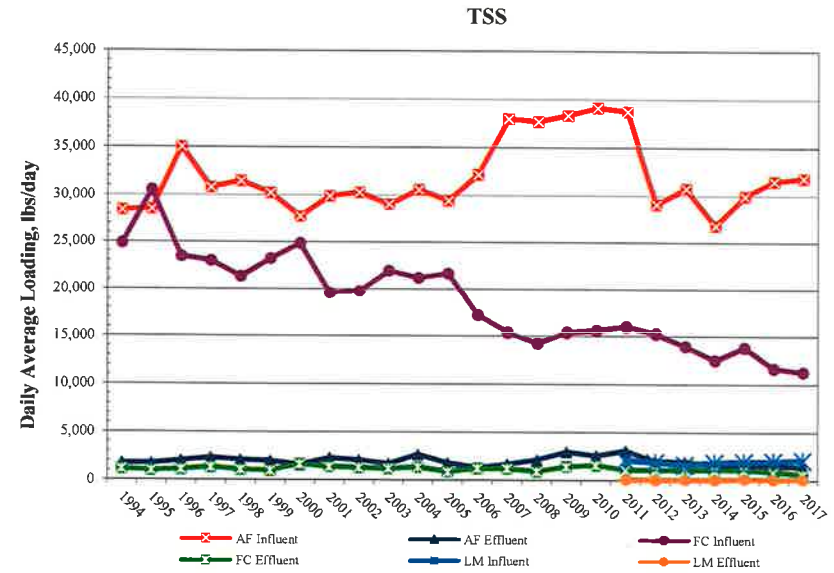
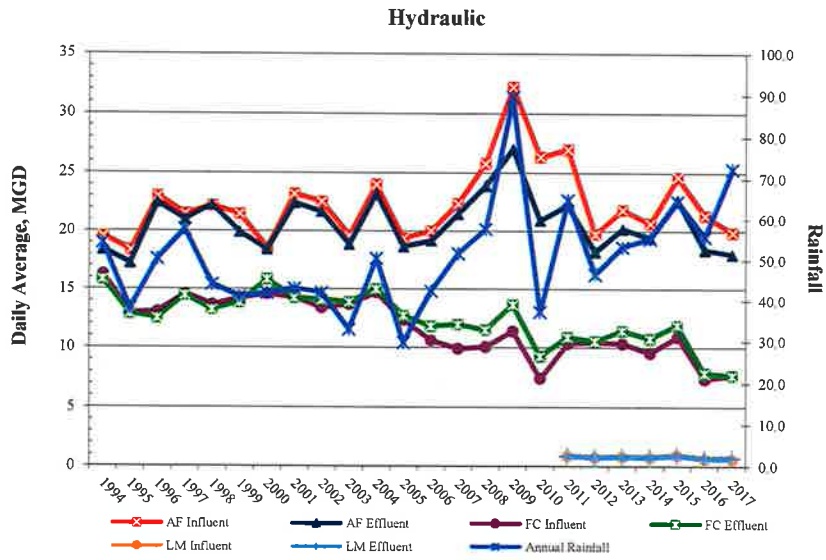
IU % Contributions

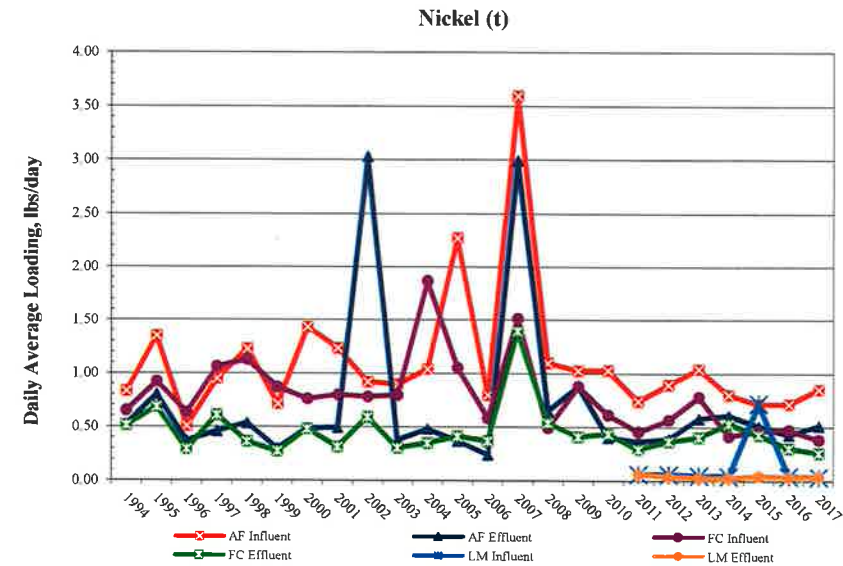
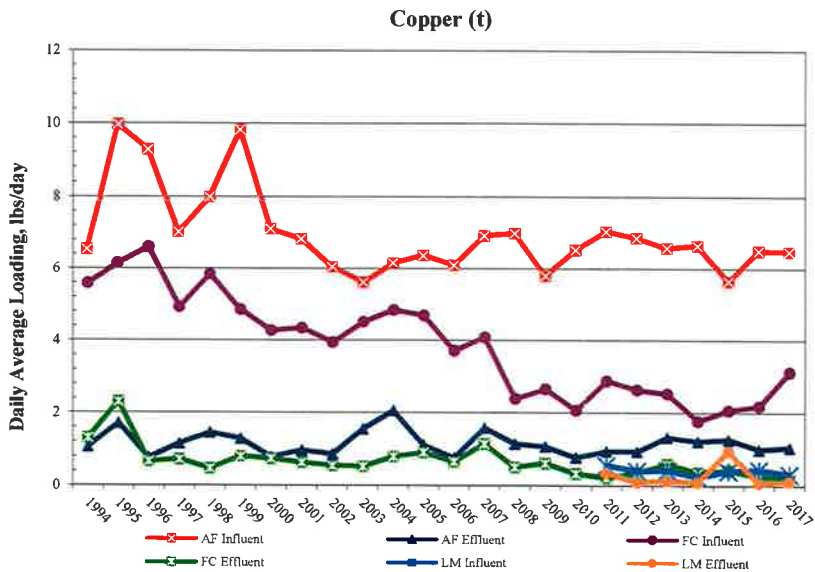
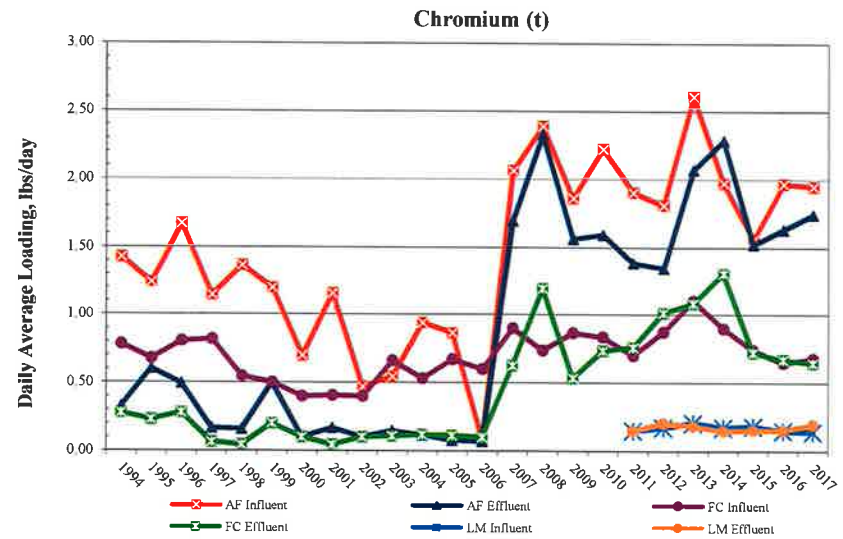
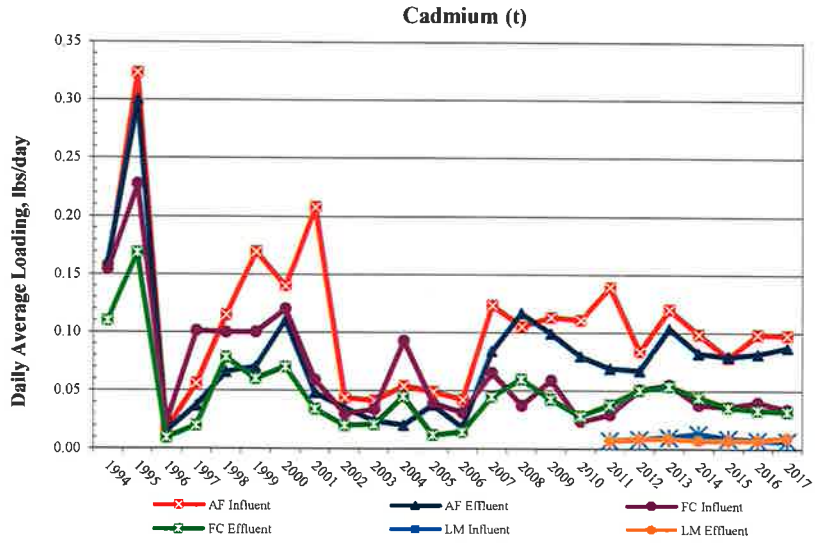


IU % Contributions

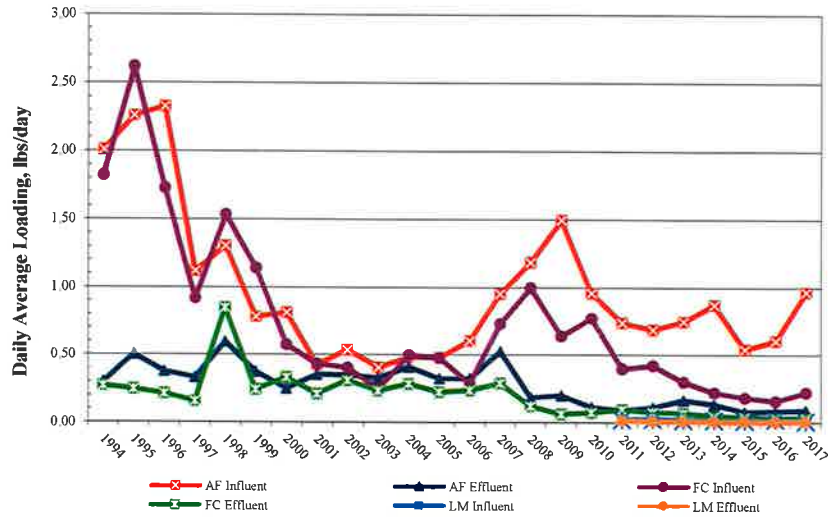


**LITTLE ROCK WATER RECLAMATION AUTHORITY
 ENVIRONMENTAL ASSESSMENT DEPARTMENT
 POTW PLANT INFLUENT/FINAL EFFLUENT LOADING TRENDS**

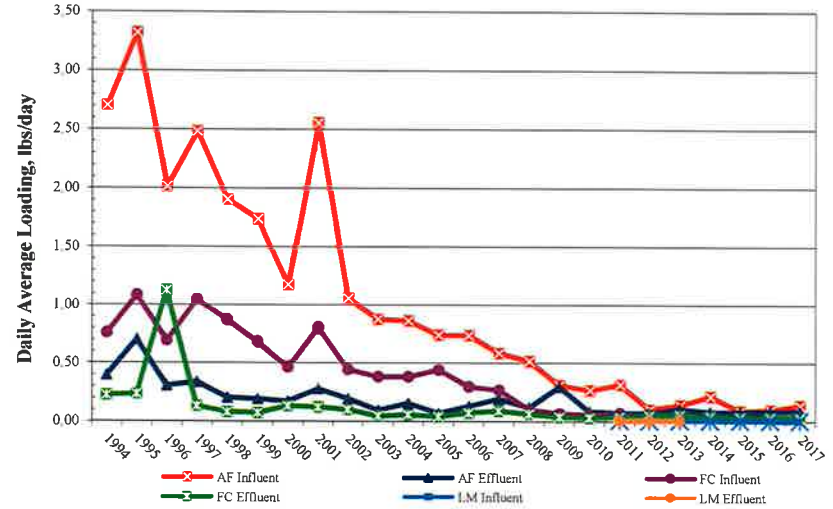




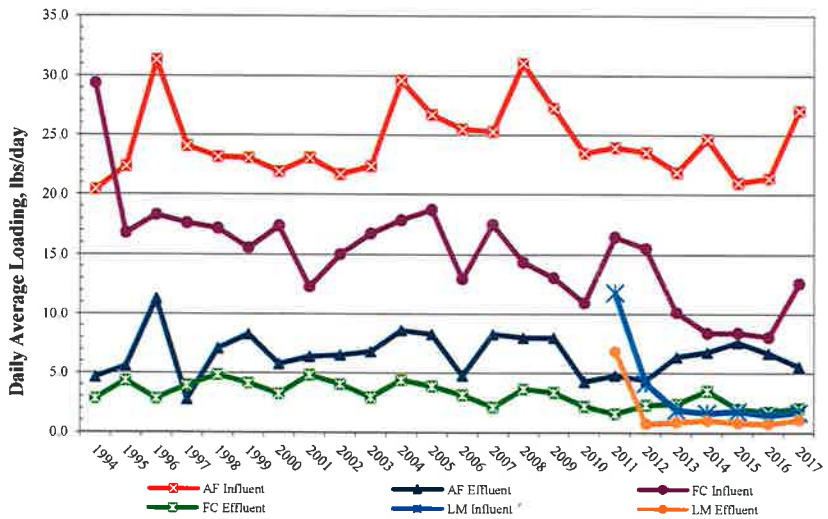
Lead (t)



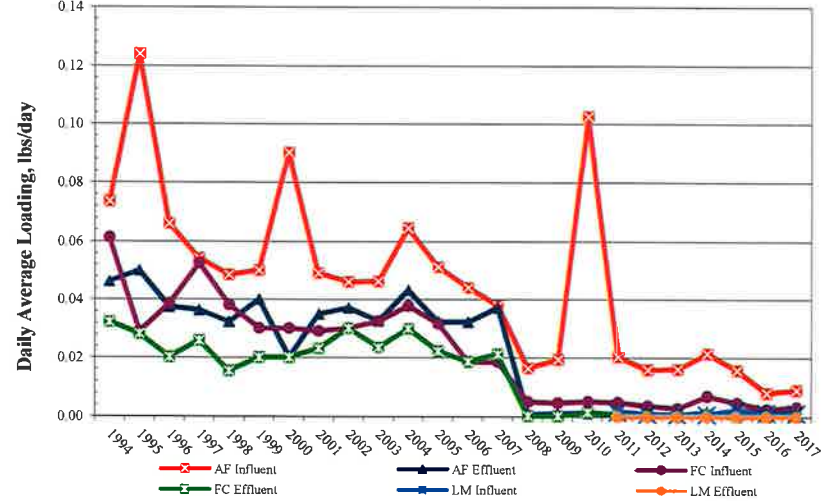
Silver (t)



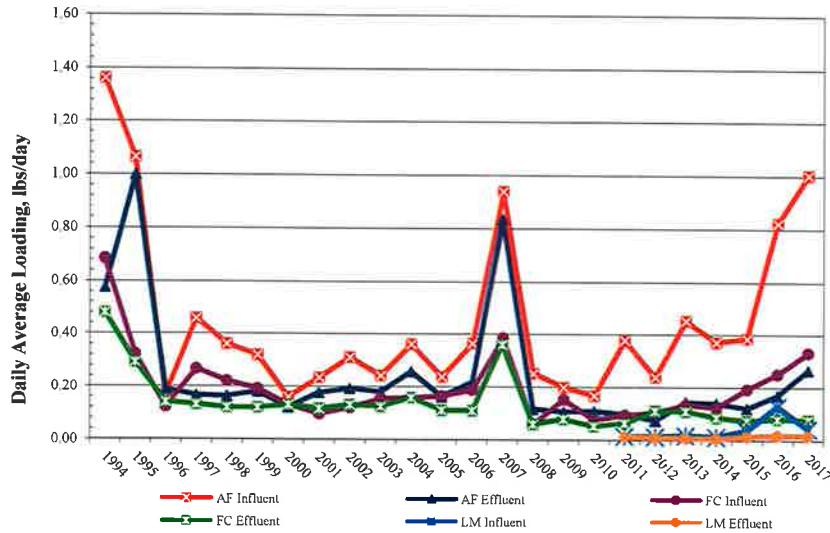
Zinc (t)



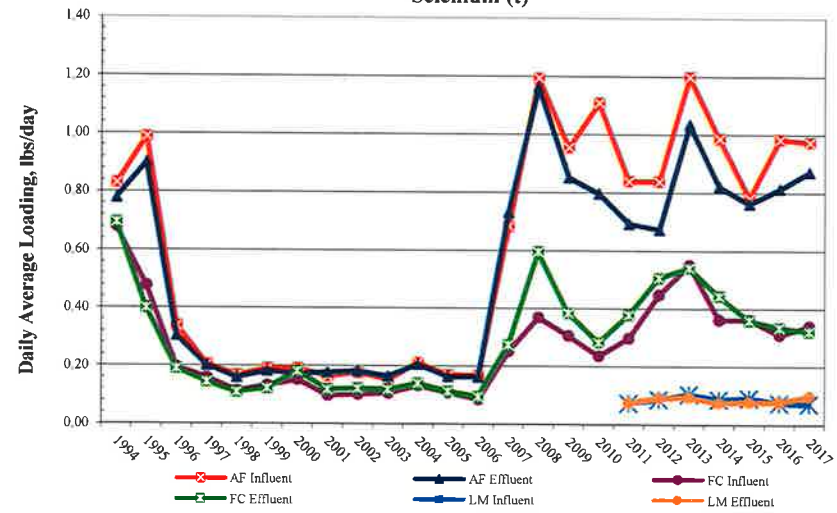
Mercury (t)



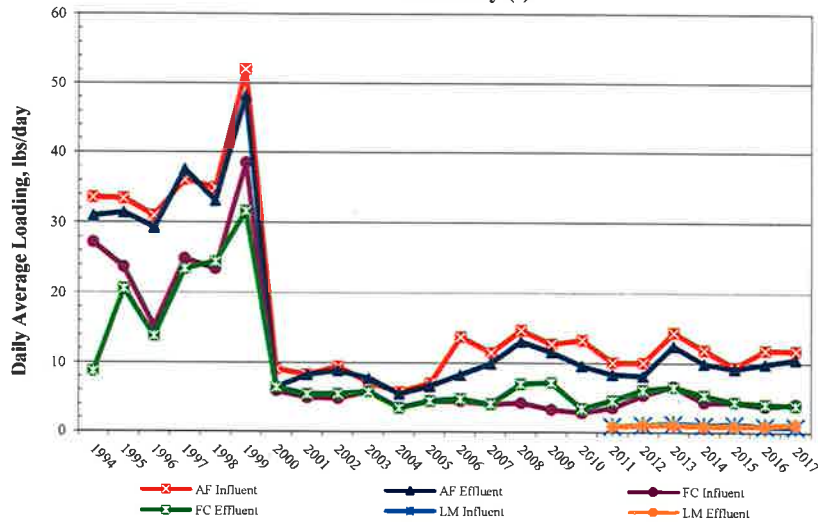
Arsenic (t)



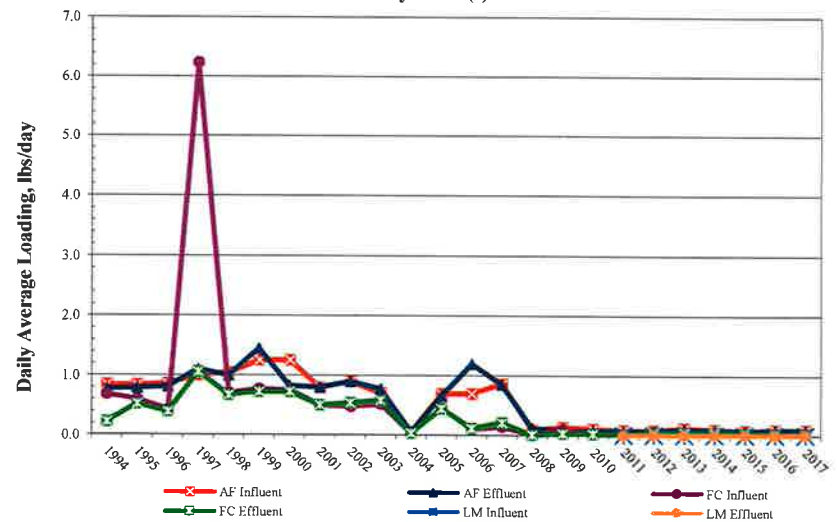
Selenium (t)



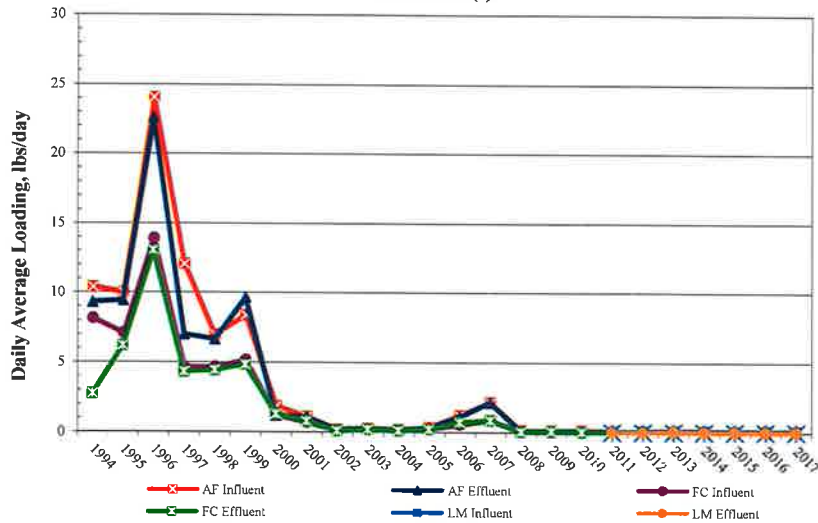
Antimony (t)



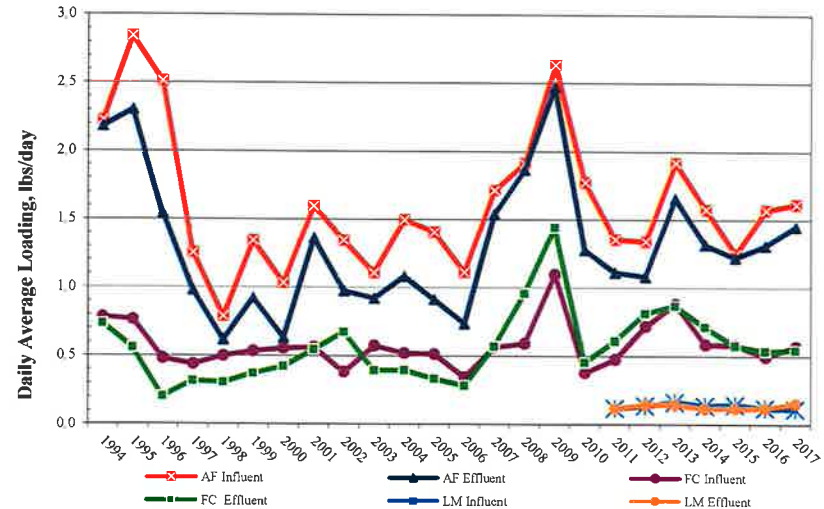
Beryllium (t)



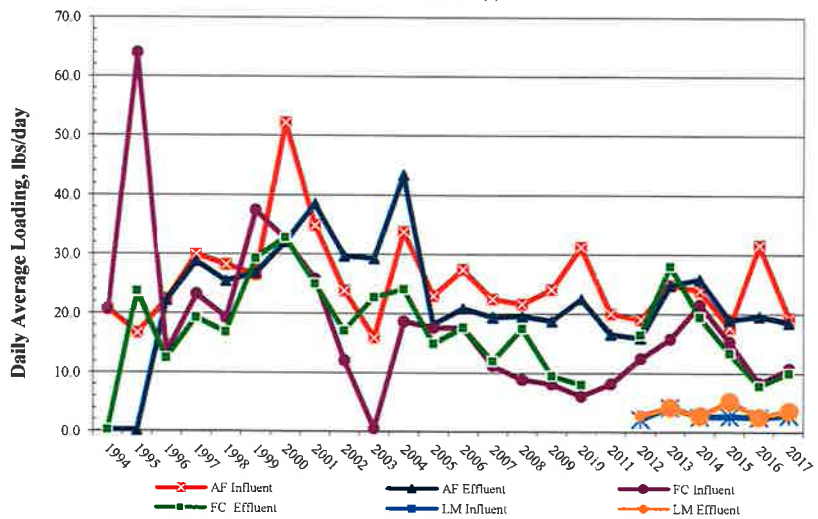
Thallium (t)



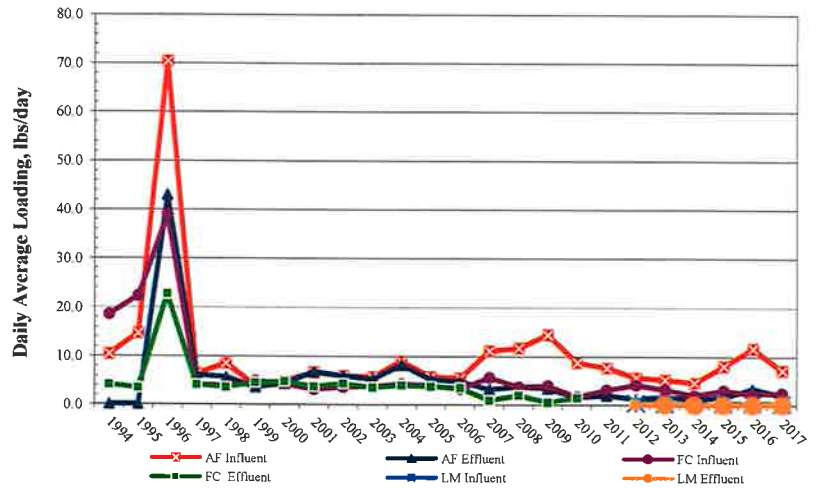
Molybdenum (t)



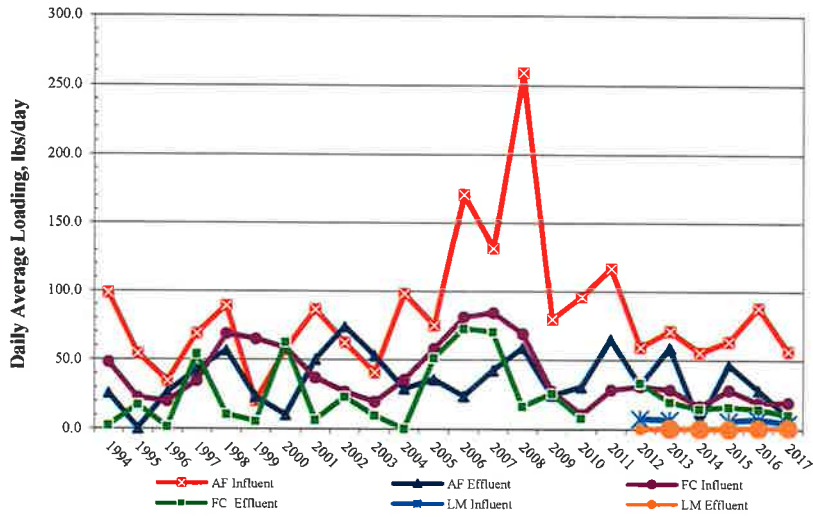
Boron (t)



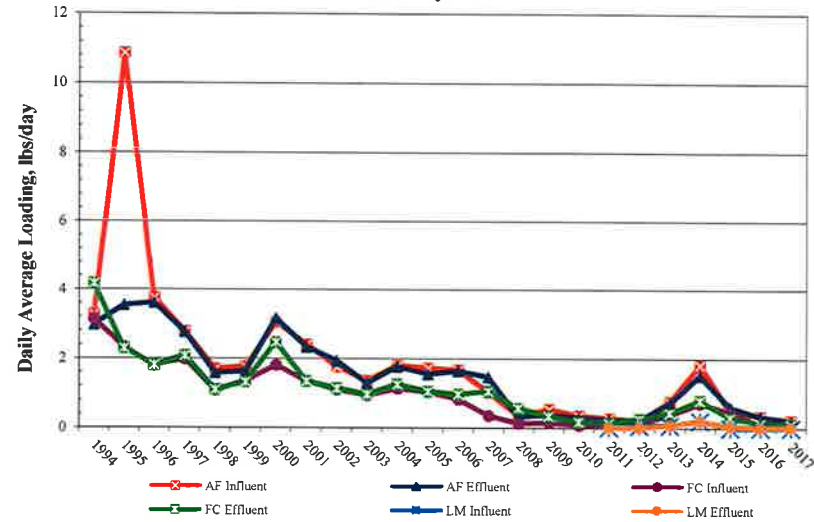
Barium (t)



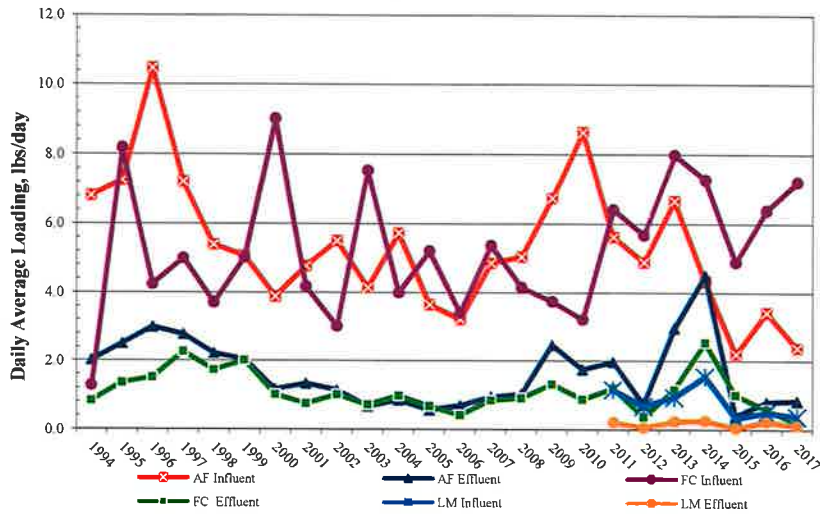
Manganese (t)



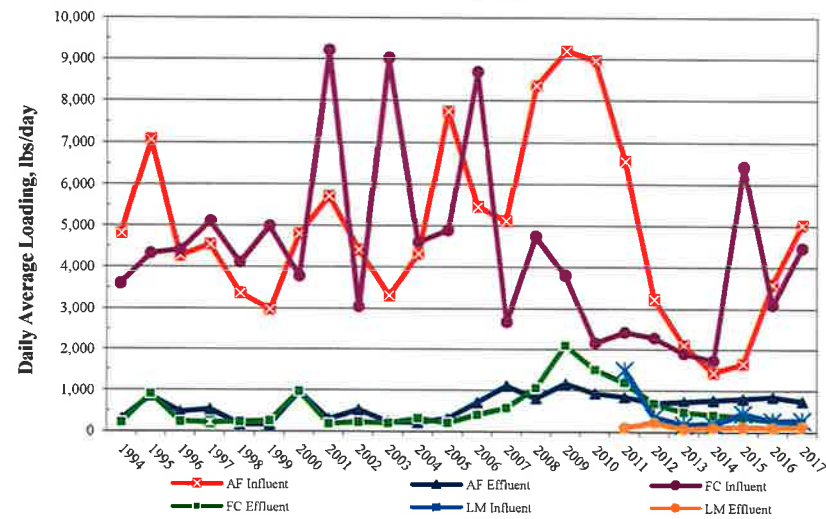
Total Cyanide



Total Phenolics



Oil & Grease



BIOSOLIDS 2017
SUMMARY OF ANALYTICAL RESULTS

FOURCHE CREEK WATER RECLAMATION FACILITY (FC-WRF) BIOSOLIDS
ANALYSES

Sludge from Little Maumelle, Adams Field and Fourche Creek Water Reclamation Facilities are anaerobically digested at the FC-WRF. The biosolids are further treated by lagoon stabilizing. Biosolids are land applied as a soil conditioner/fertilizer on lands in Pulaski County, Arkansas. A total of 4,913 dry tons of biosolids were land applied during 2017.

Biosolids from Lagoon 3 and 4 were below the ceiling and pollutant concentrations listed in 40 CFR 503. Biosolids from met Class A pathogen requirements stated in 40 CFR 503.32(a)(6). The data collected prior to land application is organized in the following tables:

- Metal Analyses Summary for FC-WRF Biosolids Lagoon 3 and 4 - This table includes the required metal test data from 40 CFR Part 503. The metals concentrations were below the 503.13 Table 1 Ceiling Concentrations and the 503.13 Table 3 Pollutant Concentrations. The ceiling concentrations and pollutant concentration limits, where applicable, are included in the table for comparison.
- Nutrient Analyses Summary for FC-WRF Biosolids Lagoon 3 and 4 - This table includes the Nutrient, PCB, and TCLP results from sampling conducted prior to land application.
- Biosolids % of the 503 Pollutant Concentration (EQ) Limit - This graph is a long term trend chart that plots the actual average values for all metal tests conducted each year against the metal concentrations of 40 CFR 503 Pollutant Concentration Limits (Table 3 of 503.13) required for certification of Exceptional Quality (EQ) Biosolids. For 2017 selenium shows an increase in mg/Kg compared to past years. Review of lab reports show selenium was none detect, but reported at a higher test method detection limit.

**FOURCHE CREEK WATER RECLAMATION FACILITY
 BIOSOLIDS 2017-LAGOON 3 & 4
 METAL ANALYSIS SUMMARY**

Sample Date	Sample Location	Sample Type	Test Parameters - Reported in mg/kg dry											
			As(t)	Cd(t)	Cr(t)	Cu(t)	Pb(t)	Hg(t)	Mo(t)	Ni(t)	Se(t)	Ag(t)	Zn(t)	CN
6/20/2017	046-3-001	grab	16.4	< 5.2	48	327	43.3	1.00	< 20.2	19.3	< 15.5	< 7	1030	
	046-3-002	grab	15.6	< 5.1		291	30.9	< 0.72	< 20.2	16.2	< 15.2		894	
	046-3-003	grab	< 16.8	< 8.4		382	42.2	0.70	< 33.6	21.9	< 25.2		1200	
	046-3-004	grab	13.5	< 4.6		306	35.9	0.84	< 18.6	17.2	< 13.9		922	
	046-3-005	grab	13.9	< 5.7		277	34.7	0.57	< 22.8	17.8	< 17.1		816	
	046-3-006	grab	16.2	< 5.0		361	47.8	0.71	20.0	20.6	< 14.9		1060	
	Lagoon	AVG	15.4	< 5.7	48	324	39.1	0.76	22.6	18.8	< 17.0	< 7	987	
3/29/2017	046-4-001	grab	12.0	2.1	53	357	42.4	< 0.92	19.2	21.5	4.5	6	1040	52.7
	046-4-002	grab	11.9	2.1		355	39.8	0.85	19.5	20.2	4.0		1010	
	046-4-003	grab	10.6	1.8		366	38.5	0.75	19.2	19.7	5.4		946	
	046-4-004	grab	11.4	2.1		347	38.5	< 0.80	20.3	20.0	4.7		983	
	046-4-005	grab	11.6	2.0		380	42.0	0.74	20.1	20.5	4.9		982	
	046-4-006	grab	11.3	1.9		376	39.2	< 0.54	19.7	20.1	5.4		956	
	Lagoon 4	AVG	11.5	2.0	53	364	40.1	0.77	19.7	20.3	4.8	6	986	

Average	13.4	< 3.8	51	344	39.6	0.76	< 21.1	19.6	< 11	< 7	987	
Maximum	16.8	< 8.4	53	382	47.8	1.00	< 33.6	21.9	< 25	< 7	1200	
Minimum	< 10.6	< 1.8	48	277	30.9	0.54	< 18.6	16.2	< 4	< 6	816	

*Ceiling Conc., mg/kg dry	75	85.0	n/a	4300	840	57.0	75	420.0	100	n/a	7500	n/a
*Pollutant Conc., mg/kg dry	41	39.0	n/a	1500	300	17.0	n/a	420.0	36	n/a	2800	n/a

*40CFR Part 503.13 Table 1 and 3 Limits for Land Application

Biosolids analysis were performed using EPA SW-846 test methods for evaluation of solid waste

NUTRIENTS

**FOURCHE CREEK WATER RECLAMATION FACILITY
BIOSOLIDS 2017-LAGOONS 3 AND 4
NUTRIENTS ANALYSIS SUMMARY**

Sample Date	Sample Location	Sample Type	Test Parameters - Reported in mg/kg dry							
			Nitrate(NO3)	Nitrite(NO2)	Phosphorus	Potassium	Ammonia as N	Total Kjeldahl Nitrogen	PCB*	TCLP*
6/20/2017	046-3-001	grab	< 13.5	< 14	49900	3180	8650	45500		
	046-3-002	grab	< 16.9	< 17	30400	3090	10300	48900		
	046-3-003	grab	80.0	< 18	36200	3710	15800	59500		
	046-3-004	grab	< 18.2	< 18	37900	3400	10800	50000		
	046-3-005	grab	< 13.1	< 13	37100	2580	8430	42300		
	046-3-006	grab	< 14.7	< 15	39900	3300	9590	51000		
	Lagoon 3	AVG	26.1	< 15.8	38567	3210	10595	49533		
3/29/2017	046-4-001	Grab	66.5	< 18	35500	3790	10900	53500		
	046-4-002	Grab	61.6	< 16	35900	3380	10400	50700		
	046-4-003	Grab	63.9	< 17	35100	3300	10100	47700		
	046-4-004	Grab	70.0	< 17	33900	3440	11900	53700		
	046-4-005	Grab	58.2	< 16	35900	3330	9860	53400		
	046-4-006	Grab	56.2	< 16	33400	3280	9090	50600		
	Lagoon 4	AVG	62.7	< 16.8	34950	3420	10375	51600	ND	Pass

Average	44	ND	36758	3315	10485	50567	ND	Pass
Maximum	80	ND	49900	3790	15800	59500	ND	
Minimum	13	ND	30400	2580	8430	42300	ND	

* 503.6(e) 503 does not establish requirements for use or disposal if determined to be hazardous in accordance to 40CFR261.

* 503.6(f) 503 does not establish requirements for use or disposal if concentration of PCBs is equal to or greater than 50 mg/kg dry.

Biosolids analysis were performed using EPA SW-846 test methods for evaluation of solid waste

PCB and TCLP sample for each lagoon was 6 part composite intergrated by weight.

ND- No Detection, NA-Not Available due to testing QC criteria.

Biosolids % of 503 Pollutant Concentration (EQ) Limit

