

# NON-COMPLIANCE REPORT

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

RE: NPDES Permit No: AR0033880 Discharge Number: 001A

Facility: Hot Springs City of WWTP

Address: 320 Davidson Dr

City: Hot Springs State: AR Zip: 71901

Contact: James Sorrells Phone: 1-501-262-1125 Ext 10

Date of Non-Compliance	Parameter Exceeded	Quantity or Loading	Quality or Concentration	Permit Limits
June-2013	Nitrogen, ammonia	Loading 636 lb/d		360.3 lb/d
June-2013	Nitrogen, ammonia		18.23 mg/l 7 Day Avg	7.50 mg/l 7 Day Avg
June-2013	Nitrogen, ammonia		7.75 mg/l Mo Avg	3.5 mg/l Mo Avg

**We fill this problem was due to:**

Combination of circumstances, it initially started with the heat transfer boilers in the anaerobic digesters, and after an extended period of time. First trying to repair then replace the existing boilers with all new. Then find out that the gas lines have rusted out, leaking and not holding enough gas pressure to run the new boilers. Over 500 feet in different sections along with several regulators had to be replaced. The waste sludge in the digester had finally become too cold. It appeared to not be digesting or breaking down, therefore what went in is what came out. There seem to be no reduction in solids or water separation. We were used to dewatering 70,000 to 80,000 gallons of sludge per day, yet we were sometime adding 100,000 gallon per day to the digesters. Then the over flow would go back to the head of the plant converting back to ammonium. Also during June the heat and humidity was up didn't and help with DO levels in aeration basins.

**We plan on correcting the problem in this manner:**

The new boilers are installed and running. We changed the process to concentrate the sludge thicker before going into digesters. Increased run times and overtime on dewatering press. We are running higher alkalinity than normal for awhile, and maximum blowers for DO. Should problem arise we have two clarifiers off line for summer maintenance and cleaning that we can send to if needed.

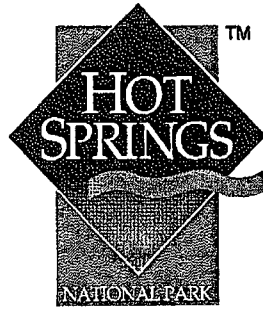
**Time estimated that it will take to correct problem:**

We have already started to recover, and July is looking good. We hope to be back to normal sooner than originally projected. I have included MR Merriman's response plus the daily ammonia levels from the first non-compliance until now. If I am missing anything please fill free to contact me.

Sincerely,

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Date



**City of Hot Springs  
Engineering Department**

133 Convention Blvd.  
Post Office Box 700  
Hot Springs National Park,  
Arkansas 71902  
(501) 321-6861  
(501) 321-6967 Fax

April Layher  
Enforcement Analyst  
Water Division, ADEQ  
5301 Northshore Drive  
North Little Rock, AR 72118-5317

Certified

Re: Permit number AR0033880

Dear Ms. Layher:

**Regional Wastewater Plant Permit Non-Compliance**

**Permit number: AR0033880**

The following will serve to document the root cause of the NPDES permit violation, as it relates to Ammonia levels, for our Regional Wastewater Plant located on Davidson Dr. in Hot Springs, Ar. This document will also provide an account of the measures taken by CHS staff to resolve the plant upset condition. All measures are intended to mitigate the potential for additional issues and to reduce the Ammonia levels.

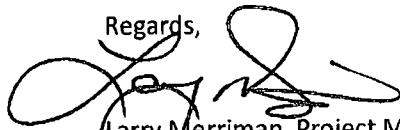
- The reason for the Ammonia limits exceeding permit level is fairly easy to identify. We lost our Boiler that provided heat to the Digesters, once the Boiler became inoperable we pursued a repair effort. In the middle of that endeavor we discovered the Boiler was beyond repair. That lead us to the effort involving procurement and installation of a new Boiler. During the start up of the new Boiler we discovered our gas line had degraded to the extent it too had to be replaced. All of this took so much time we ended up having temperatures too low to support the biological needs for our "Bugs". Once the new Boiler was installed we began trying to bring the Digesters back to the operating temperatures. We found that trying to heat both of them was impractical, at that point we began to make operational adjustments to heat only (1) at a time. We have since made good progress on that effort. In addition to those operational changes we also have introduced an operational change to utilize (3) of our Blowers as opposed to our normal practice of running (2) of them. At this time, we are achieving a level of success. The non-compliance report you will receive is for the month of June. If our trends continue as they are today, we will exceed the first 7 days of July but should be compliant with the 30 day levels.

We anticipate a full recovery of our Digesters by end of July that will once again demonstrate we are compliant with the permit levels.

- Below are the daily Ammonia levels for the month of July:
  - 7/1 - 10.5
  - 7/2- 8.75
  - 7/3- 5.36
  - 7/4- 6.79
  - 7/5- 4.3
  - 7/6- 12.8
  - 7/7- 16.6
  - 7/8- 14.7
  - 7/9- 9.92
  - 7/10- 6.81
  - 7/11- 2.31
  - 7/12- 2.19
  - 7/13- 0.11
  - 7/14- 0.75
  - 7/15- 0.23
  - 7/16- 0.25
  - 7/17- 0.21
  - 7/18- 0.42
  - 7/19- 0.84
  - 7/20- 1.1
  - 7/21- 0.05

The City of Hot Springs has a history of permit compliance of which we are very proud. We also value our relationship with our partners at ADEQ. Our meeting on July 8<sup>th</sup> was a demonstration of our good faith effort to maintain an open communication with ADEQ. We are grateful for your help to date and will always invite your team to offer any recommendation(s) that will enable us to succeed.

Regards,



Larry Merriman, Project Manager  
City of Hot Springs

CC: Bill Burrough  
Gary Carnahan  
James Sorrells

## Regional Wastewater Plant Permit Non-Compliance

Permit number: AR0033880

The following will serve to document the root cause of the NPDES permit violation, as it relates to Ammonia levels, for our Regional Wastewater Facility located on Davidson Dr. in Hot Springs, Ar. This document will also provide an account of the measures taken by CHS staff to resolve the plant upset condition. All measures are intended to mitigate the potential for additional issues and to reduce the Ammonia levels.

**June – Dec. 2012 – Equipment Failure-** Plant digester Boiler becomes inoperable. Staff secures services of contractors to determine reason Boiler will not stay “lit”. Staff secures contractor services to have Boiler repaired; contractor determines mid way through repair efforts that the Boiler has degraded to the extent it cannot be repaired. Staff is now faced with the need to replace the existing Boiler.

**Dec 2012 – Jan 2013 –** Staff develops a project to have an energy efficiency study performed to provide guidance on best selection of replacement equipment. Once equipment study was completed, staff initiated the procurement process to solicit bids for a replacement Boiler. At this time the plant was still operating well within the permit requirements.

**March 2013-** Bids are reviewed and selection of the equipment is finalized. Plant remains compliant with permit requirements.

**May 2013-** Boiler is delivered to site and project to install Boiler begins.

**June 2013 -** With new Boiler in place staff begins process of start-up.

**June 2013 -** Staff determines existing gas supply line has degraded to the extent it will require complete replacement.

**June 2013-** New gas line is installed and staff completes start-up of new Boiler.

**July 2013-** Staff realizes Ammonia levels will result in non-compliance issue related to NPDES permit.

**July 2013-** Staff meets with ADEQ to discuss plant upset condition, permit violation, and to share staffs plan to remedy the issue.

***In summary-*** Once it was determined the existing Boiler was beyond repair the necessary stapes to replace it began. Unfortunately, that time spent in the attempt to repair the Boiler, along with other issues involving the Gas Line resulted in delays that greatly affected our operational process. We were simply unable to recover from the upset condition as we needed to. Staff has been diligently reviewing operational procedures and finding innovative methods to expedite the recovery of our Digester process. In addition to utilizing some operational changes in Blowers and developing alternate operational schemes, we have secured the services of our consulting Engineers, Garver, to provide a review as well. We have no doubt we will recover from this upset condition, the goal now is to do so in a safe and effective manner. The City of Hot Springs has a history of permit compliance and we are very proud of that. We also value our relationship with our partners @ ADEQ. Our meeting on July 8<sup>th</sup> was a demonstration of our good faith effort to maintain an open communication with ADEQ. We are grateful for their help to date and will always invite them to offer any recommendation that will enable us to succeed.

# Sanitary Sewer Overflow (SSO) Monthly Report

ility Name: Hot Springs Wastewater NPDES Permit No.: AR0033880 Monitoring Period (Month/Year) June / 2013

**No Sanitary Sewer Overflows This Monitoring Period**

### Summary Report Code Descriptions

Cause(s) of SSO	SSO Impact	Action(s) Taken	Ultimate Discharge Location
<b>CO</b> -Construction	<b>D</b> -Debris	<b>NEAH</b> -No Evidence Adverse Health/Environmental Impact	<b>CR</b> -Creek/Stream/River (specify)
<b>E</b> -Equipment Failure	<b>G</b> -Grease	<b>OEHC</b> -Observed or Evidence of Human Contact	<b>EC</b> -Environmental Cleanup
<b>HC</b> -Hydro Clean	<b>LF</b> -Line Failure	<b>EFK</b> -Evidence of Fish Kill	<b>DI</b> -Ditch
<b>R</b> -Rainfall	<b>RG</b> -Roots/Grease		<b>DR</b> -Drop Inlet
<b>RO</b> -Roots	<b>V</b> -Vandalism		<b>GR</b> -Ground Surface
		<b>EN</b> -Referred to Engineering	<b>PA</b> -Paved Area
		<b>PN</b> -Public Notification	<b>CB</b> -Contained in Building

Location	Manhole #	Start Date of SSO	End Date of SSO	Estimated Volume (in gallons)	Cause of SSO	Environmental Impact	Action(s) Taken to Address SSO	Discharge Location
Carpenter Dam Rd.	MH# 5259	06/01/2013	06/02/2013	10000	R	NEAH	HC & EC	CR-Unknown
Fontana Rd	MH# 1865	06/01/2013	06/02/2013	15000	R	NEAH	HC & EC	CR-Hot Springs
McLeod St	MH# 993	06/01/2013	06/02/2013	15000	R	NEAH	HC & EC	CR-Stokes
Catherine Heights Rd	MH# 1750	06/01/2013	06/02/2013	15000	R	NEAH	HC & EC	CR-Gulpha
Lakeshore Dr.	MH# 7746	06/05/2013	06/05/2013	1500	E	NEAH	HC & EC	CR-Lake Hamilton
Aberina St	MH# 8173	06/14/2013	06/14/2013	5000	E	NEAH	HC & EC	CR-Lake Hamilton

Signature of Cognizant or Ranking Official

Date 7-24-13

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 of knowing violations.

**CONFIRMATION NUMBER**

**24243917-CE38-4AFD-B899-9D6C2E994049**

(NOTE: You will need this number should you ever need to contact ADEQ concerning this report)

**The following information has been sent.**

[Close this window](#) [Print this page](#)

**24-Hour Sanitary Sewer Overflow Report**

**SSO ID#:** 24243917-CE38-4AFD-B899-9D6C2E994049

**Date Sent:** 6/3/2013

SSO  Bypass  Upset

Facility Permit Number: **AR0033880**  
Date Overflow Began: **6/1/2013**  
Date Overflow Ended: **6/2/2013**  
Location: **MH # 5259, Carpenter dam rd, ran over into unknown stream**

Facility name:  
Time:  
Time:

**Hot Springs Wastewater**  
**10:00 am**  
**10:00 am**

(Give address, manhole number-if numbered. Include where the overflow went-yard, ditch, stream, storm sewer, building, other).

**Type of Overflow**

- Manhole Overflow
- Lift Station Overflow
- Main Line Overflow
- Service Line Overflow
- Other Overflow Type:

(Enter overflow type if not listed)

**Volume:**

**10000**

(Give an estimate in gallons)

**Impact of SSO Event:**

**SSO Reached Receiving Water (river,stream)**

**Cause of Overflow**

- I & I - Rainfall
- Roots
- Grease
- Debris
- Equipment Failure
- Construction
- Vandalism
- Power Failure
- Line Failure/Break
- Other Cause:

**Action Taken - Check all that apply**

(Short term and long-term action, including clean-up and any plans to remediate I & I).

- Machine rodded
- Jet-Vac
- Hand rodded
- Used Generator To Power Pumps/Equipment
- Other: Describe
- Disinfected and Deodorized
- Hydro Cleaned
- Spread Lime on Affected Area
- Public Notification

**raked up**

**Environmental Damage**

- OEHC - Observed or Evidence of Human Contact
- OEI - Observed or Evidence of Environmental Impact
- NEAH - No Evidence of Adverse Health/Environmental Impact
- EFK - Evidence of Fish Kill

Reported By **Chris Gordon**

Title

**MAintenance Controller**

Telephone Number **(501) 623-7963**

Additional Comments if Needed:

[Empty text box for additional comments]

CONFIRMATION NUMBER

71683E6C-2EA1-484F-8F89-45CC6DF60CBE

(NOTE: You will need this number should you ever need to contact ADEQ concerning this report)

The following information has been sent.

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24-Hour Sanitary Sewer Overflow Report

SSO ID#: 71683E6C-2EA1-484F-8F89-45CC6DF60CBE

Date Sent: 6/3/2013

SSO  Bypass  Upset

Facility Permit Number: AR0033880

Facility name: Hot Springs Wastewater

Date Overflow Began: 6/1/2013

Time: 6:00 pm

Date Overflow Ended: 6/2/2013

Time: 8:00 pm

Location:

MH # 1865, Fontana Rd, ran over into Hot Springs Creek

(Give address, manhole number-if numbered. Include where the overflow went-yard, ditch, stream, storm sewer, building, other).

Type of Overflow

- Manhole Overflow
- Lift Station Overflow
- Main Line Overflow
- Service Line Overflow
- Other Overflow Type:

(Enter overflow type if not listed)

Cause of Overflow

- I & I - Rainfall
- Roots
- Grease
- Debris
- Equipment Failure
- Construction
- Vandalism
- Power Failure
- Line Failure/Break
- Other Cause:

Volume:

15000

(Give an estimate in gallons)

Impact of SSO Event:

SSO Reached Receiving Water (river,stream)

Action Taken - Check all that apply

(Short term and long-term action, including clean-up and any plans to remediate I & I).

- Machine rodded
- Jet-Vac
- Hand rodded
- Used Generator To Power Pumps/Equipment
- Other: Describe
- Disinfected and Deodorized
- Hydro Cleaned
- Spread Lime on Affected Area
- Public Notification

raked up

Environmental Damage

- OEHC - Observed or Evidence of Human Contact
- OEEI - Observed or Evidence of Environmental Impact
- NEAH - No Evidence of Adverse Health/Environmental Impact
- EFK - Evidence of Fish Kill

Reported By Chris Gordon

Title

maintenance controller

Telephone Number (501) 623-7963

Additional Comments if Needed:

[Empty text box for additional comments]



**CONFIRMATION NUMBER**

**2B85A6BA-1921-46C1-A4C4-A2431104A232**

(NOTE: You will need this number should you ever need to contact ADEQ concerning this report)

**The following information has been sent.**

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**24-Hour Sanitary Sewer Overflow Report**

**SSO ID#:** 2B85A6BA-1921-46C1-A4C4-A2431104A232

**Date Sent:** 6/3/2013

SSO  Bypass  Upset

Facility Permit Number: **AR0033880**

Facility name: **Hot Springs Wastewater**

Date Overflow Began: **6/1/2013**

Time: **10:00 am**

Date Overflow Ended: **6/2/2013**

Time: **8:00 am**

Location:

**MH # 993, Mcleod Street, ran over into Stokes Creek**

*(Give address, manhole number-if numbered. Include where the overflow went-yard, ditch, stream, storm sewer, building, other).*

**Type of Overflow**

- Manhole Overflow
- Lift Station Overflow
- Main Line Overflow
- Service Line Overflow
- Other Overflow Type:

*(Enter overflow type if not listed)*

**Volume:**

**15000**

*(Give an estimate in gallons)*

**Impact of SSO Event:**

**SSO Reached Receiving Water (river,stream)**

**Cause of Overflow**

- I & I - Rainfall
- Roots
- Grease
- Debris
- Equipment Failure
- Construction
- Vandalism
- Power Failure
- Line Failure/Break
- Other Cause:

**Action Taken - Check all that apply**

*(Short term and long-term action, including clean-up and any plans to remediate I & I).*

- Machine rodded
- Jet-Vac
- Hand rodded
- Used Generator To Power Pumps/Equipment
- Other: Describe
- Disinfected and Deodorized
- Hydro Cleaned
- Spread Lime on Affected Area
- Public Notification

**raked up**

**Environmental Damage**

- OEHC - Observed or Evidence of Human Contact
- OEEI - Observed or Evidence of Environmental Impact
- NEAH - No Evidence of Adverse Health/Environmental Impact
- EFK - Evidence of Fish Kill

Reported By **Chris Gordon**

Title

**Maintenance Controller**

Telephone Number **(501) 623-7963**

Additional Comments if Needed:

CONFIRMATION NUMBER

CC2F0FC3-8089-4CD0-9B9D-4F468367B3D6

(NOTE: You will need this number should you ever need to contact ADEQ concerning this report)

The following information has been sent.

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24-Hour Sanitary Sewer Overflow Report

SSO ID#: CC2F0FC3-8089-4CD0-9B9D-4F468367B3D6

Date Sent: 6/3/2013

SSO  Bypass  Upset

Facility Permit Number: AR0033880

Facility name:

Hot Springs Wastewater

Date Overflow Began: 6/1/2013

Time:

10:00 am

Date Overflow Ended: 6/2/2013

Time:

3:00 pm

Location:

MH # 1750, Catherine Heights, Ran over into Gulpha Creek

(Give address, manhole number-if numbered. Include where the overflow went-yard, ditch, stream, storm sewer, building, other).

Type of Overflow

- Manhole Overflow
- Lift Station Overflow
- Main Line Overflow
- Service Line Overflow
- Other Overflow Type:

(Enter overflow type if not listed)

Volume: 15000

(Give an estimate in gallons)

Impact of SSO Event: SSO Reached Receiving Water (river,stream)

Cause of Overflow

- I & I - Rainfall
- Roots
- Grease
- Debris
- Equipment Failure
- Construction
- Vandalism
- Power Failure
- Line Failure/Break
- Other Cause:

Action Taken - Check all that apply

(Short term and long-term action, including clean-up and any plans to remediate I & I).

- Machine rodded  Disinfected and Deodorized
- Jet-Vac  Hydro Cleaned
- Hand rodded  Spread Lime on Affected Area
- Used Generator To Power Pumps/Equipment  Public Notification
- Other: Describe raked up

Environmental Damage

- OEHC - Observed or Evidence of Human Contact  NEAH - No Evidence of Adverse Health/Environmental Impact
- OE EI - Observed or Evidence of Environmental Impact  EFK - Evidence of Fish Kill

Reported By Chris Gordon

Title Maintenance Controller

Telephone Number (501) 623-7963

Additional Comments if Needed:

CONFIRMATION NUMBER

D082289F-055E-43B3-8C30-36D27BCAEE26

(NOTE: You will need this number should you ever need to contact ADEQ concerning this report)

The following information has been sent.

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24-Hour Sanitary Sewer Overflow Report

SSO ID#: D082289F-055E-43B3-8C30-36D27BCAEE26

Date Sent: 6/5/2013

SSO  Bypass  Upset

Facility Permit Number: AR0033880

Facility name:

Hot Springs Wastewater

Date Overflow Began: 6/5/2013

Time:

2:30 pm

Date Overflow Ended: 6/5/2013

Time:

3:00 pm

Location:

MH #7746, Lakeshore Rd, Ran over into stream of Lake Hamilton

(Give address, manhole number-if numbered. Include where the overflow went-yard, ditch, stream, storm sewer, building, other).

Type of Overflow

- Manhole Overflow
- Lift Station Overflow
- Main Line Overflow
- Service Line Overflow
- Other Overflow Type:

(Enter overflow type if not listed)

Volume:

1500

(Give an estimate in gallons)

Impact of SSO Event:

SSO Reached Receiving Water (river,stream)

Cause of Overflow

- I & I - Rainfall
- Roots
- Grease
- Debris
- Equipment Failure
- Construction
- Vandalism
- Power Failure
- Line Failure/Break
- Other Cause:

Action Taken - Check all that apply

(Short term and long-term action, including clean-up and any plans to remediate I & I).

- Machine rodded
- Jet-Vac
- Hand rodded
- Used Generator To Power Pumps/Equipment
- Other: Describe
- Disinfected and Deodorized
- Hydro Cleaned
- Spread Lime on Affected Area
- Public Notification

raked up

Environmental Damage

- OEHC - Observed or Evidence of Human Contact
- OEI - Observed or Evidence of Environmental Impact
- NEAH - No Evidence of Adverse Health/Environmental Impact
- EFK - Evidence of Fish Kill

Reported By Chris Gordon

Title

Maintenance Controller

Telephone Number (501) 623-7963

Additional Comments if Needed:

Empty text box for additional comments.

CONFIRMATION NUMBER

7185C3B7-F759-46A7-BFC8-CFC5DEB3AAA4

(NOTE: You will need this number should you ever need to contact ADEQ concerning this report)

The following information has been sent.

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24-Hour Sanitary Sewer Overflow Report

SSO ID#: 7185C3B7-F759-46A7-BFC8-CFC5DEB3AAA4

Date Sent: 5/14/2013

SSO  Bypass  Upset

Facility Permit Number: AR0033880  
Date Overflow Began: 5/14/2013  
Date Overflow Ended: 5/14/2013  
Location:

Facility name:  
Time:  
Time:

Hot Springs Wastewater  
9:00 am  
9:30 am

MH # 8173, Aberina st, ran over in stream of Lake Hamilton

(Give address, manhole number-if numbered. Include where the overflow went-yard, ditch, stream, storm sewer, building, other).

Type of Overflow

- Manhole Overflow
- Lift Station Overflow
- Main Line Overflow
- Service Line Overflow
- Other Overflow Type:

(Enter overflow type if not listed)

Volume: 5000

(Give an estimate in gallons)

Impact of SSO Event: SSO Reached Receiving Water (river,stream)

Cause of Overflow

- I & I - Rainfall
- Roots
- Grease
- Debris
- Equipment Failure
- Construction
- Vandalism
- Power Failure
- Line Failure/Break
- Other Cause:

Action Taken - Check all that apply

(Short term and long-term action, including clean-up and any plans to remediate I & I).

- Machine rodded
- Jet-Vac
- Hand rodded
- Used Generator To Power Pumps/Equipment
- Other: Describe
- Disinfected and Deodorized
- Hydro Cleaned
- Spread Lime on Affected Area
- Public Notification

raked up

Environmental Damage

- OEHC - Observed or Evidence of Human Contact
- OEEI - Observed or Evidence of Environmental Impact
- NEAH - No Evidence of Adverse Health/Environmental Impact
- EFK - Evidence of Fish Kill

Reported By Chris Gordon

Title Maintenance Controller

Telephone Number (501) 623-7963

Additional Comments if Needed:

[Empty text box for additional comments]