

**Crist Engineers, Inc.**

1 Executive Center Court  
Little Rock, Arkansas 72211  
Telephone (501) 664-1552  
www.cristengineers.com



**Consulting Engineers**

Matthew D. Dunn  
Craig A. Johnson  
Brian N. Wintle

January 24, 2024

VIA E-MAIL: [richard.healey@adeq.state.ar.us](mailto:richard.healey@adeq.state.ar.us)

Mr. Richard Healey  
Enforcement Branch Manager  
Arkansas Energy & Environment, OWQ  
5301 Northshore Drive  
North Little Rock, AR 72118-5317

RE: City of Malvern, Arkansas  
NPDES Permit No. AR0034126, AFIN 30-00040  
2023 Year-End SSO Report

Dear Mr. Healey:

On behalf of Malvern Water Works, I am submitting the 2023 Year-End sanitary sewer overflow (SSO) Report.

All 2023 SSOs were reported in accordance with Part II of NPDES permit AR0034126. Malvern has continued to implement the Bacteria Sampling and Communication Plan as approved by the Division of Environmental Quality (DEQ) on March 15, 2023. Work completed to date to correct the ongoing SSOs is detailed in the attached quarterly progress reports. These reports are a requirement of the corrective action plan (CAP) approved by DEQ on December 6, 2022.

SSOs are a direct result of inflow and infiltration in the collection system in tandem with capacity limitations at the Walco Road pump station. As part of the 2023 sanitary sewer evaluation survey (SSES) report scheduled to be complete in the Spring of 2024, preliminary smoke testing and sewer main closed-circuit television (CCTV) data has been provided to Malvern to facilitate and prioritize the required corrective work. To date, Malvern has eliminated several sources of I&I and is continuing to do so as more data from the SSES is received.

Should you have any questions or concerns, please do not hesitate to reach out anytime at 501.664.1552.

Sincerely,  
Crist Engineers, Inc.

A handwritten signature in blue ink that reads "Mason Allen".

Mason Allen, P.E.  
Project Manager

Cc: David Coston, General Manager, Malvern Water Works (via email)  
Carl Wheatley, Superintendent, Malvern Water Works (via email)  
John Davis, Operator, Malvern Water Works (via email)



January 13, 2023

VIA E-MAIL: [leslie.allen-daniel@adeq.state.ar.us](mailto:leslie.allen-daniel@adeq.state.ar.us)

Ms. Leslie Allen-Daniel  
Enforcement Coordinator, DEQ, OWQ  
5301 Northshore Drive  
North Little Rock, AR 72118-5317

RE: City of Malvern, Arkansas  
NPDES Permit No. AR0034126, AFIN 30-00040  
SSOs: Manholes #154 & #155 at Laurel and Davis – Request for CAP  
Progress Report 01

Dear Ms. Allen-Daniel:

Progress Report 01 Summary is provided in Table 1 below.

Item No.	Corrective Action Description	Target Initiation Date	Target Completion Date	Status
1.	Flow Monitoring and Rainfall Monitoring	March 31, 2023	July 31, 2023	Yet to Commence
2.	CCTV Inspection	May 31, 2023	August 31, 2023	Yet to Commence
3.	Smoke Testing	July 1, 2023	September 30, 2023	Yet to Commence
4.	Capital Improvement Plan and Schedule of Improvements	September 1, 2023	December 31, 2023	Yet to Commence

**Table 1: Milestone Schedule Status**

In December 2022 Malvern Water Works self-performed an open cut replacement of the 6" clay sewer main that connects MH 154 and MH 155 with new 6" SDR-26 PVC. This was in response to their inability to inspect the segment by CCTV due to offset joints and root intrusion. During the replacement they located three (3) inactive sewer service lines and filled them with flowable fill before abandoning them. It was also discovered that stormwater collecting in the nearby curb inlet was flowing into the old sewer main through a large pipe fracture.

In total, four (4) sources of inflow and infiltration (I&I) into this critical pipe segment were identified and eliminated. After a significant wet weather event post open cut replacement, Malvern noticed that the water level in MH 155 was lower now than it had been during past wet weather events of similar intensity, indicating that the self-performed pipe replacement is already helping to reduce and eventually eliminate sanitary sewer overflows (SSOs) at MH 154 and MH 155.

Ms. Leslie Allen-Daniel  
City of Malvern, Arkansas  
Request for CAP: AR0034126, AFIN 30-00040  
Progress Report 01  
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In January 2023 Crist Engineers surveyed MH 154, MH 155, and 19 additional manholes upstream and downstream of the Laurel and Davis intersection. Information gathered from this survey includes MH rim elevations, sewer invert elevations, and sewer pipe diameters. This information will allow us to build a hydraulic profile of the area that will aid in verifying pipe capacities, segment slopes, and potential bottlenecks that may also be contributing to the Laurel and Davis SSOs.

Over the next several weeks, the City of Malvern plans to engage Crist Engineers and RJN Group to begin planning for the proposed corrective action work as shown in Table 1. The milestone schedule submitted in the original CAP will be updated as corrective actions are completed.

Should you have any questions or concerns, please don't hesitate to reach out anytime at 501.993.2922.

Sincerely,  
Crist Engineers, Inc.



Matthew D. Dunn, P.E.  
President

Cc: Honorable Brenda Weldon, Mayor, City of Malvern  
David Coston, General Manager, Malvern Water Works  
Carl Wheatley, Superintendent, Malvern Water Works  
Richard Healey, Enforcement Branch Manager, DEQ, OWQ



April 14, 2023

VIA E-MAIL: [leslie.allen-daniel@adeq.state.ar.us](mailto:leslie.allen-daniel@adeq.state.ar.us)

Ms. Leslie Allen-Daniel  
Enforcement Coordinator, DEQ, OWQ  
5301 Northshore Drive  
North Little Rock, AR 72118-5317

RE: City of Malvern, Arkansas  
NPDES Permit No. AR0034126, AFIN 30-00040  
SSOs: Manholes #154 & #155 at Laurel and Davis – Request for CAP  
Progress Report 02

Dear Ms. Allen-Daniel:

Progress Report 02 Summary Milestone Schedule is provided in Table 1 below.

Item No.	Corrective Action Description	Target Initiation Date	Target Completion Date	Status
1.	Flow Monitoring and Rainfall Monitoring	March 31, 2023	July 31, 2023	Ongoing
2.	CCTV Inspection	May 31, 2023	August 31, 2023	Yet to Commence
3.	Smoke Testing	July 1, 2023	September 30, 2023	Yet to Commence
4.	Capital Improvement Plan and Schedule of Improvements	September 1, 2023	December 31, 2023	Yet to Commence

**Table 1: Milestone Schedule Status**

On March 17, 2023 the City of Malvern entered a Contract with Crist Engineers to perform the Sanitary Sewer Evaluation Study and Develop a Capacity Assurance Plan for the sewer system.

Crist Engineers is currently working with RJN Group on the corrective action work as described in Table 1. To date, nineteen (19) manholes have been inspected and all nine (9) flow meters identified as necessary have been installed. Additionally, 5,000 smoke notices have been printed to be distributed prior to beginning smoke testing.

Should you have any questions or concerns, please do not hesitate to reach out anytime at 501.664.1552.

Sincerely,  
Crist Engineers, Inc.

Matthew D. Dunn, P.E.  
President

Cc: Honorable Brenda Weldon, Mayor, City of Malvern (via email)  
David Coston, General Manager, Malvern Water Works (via email)  
Carl Wheatley, Superintendent, Malvern Water Works (via email)  
Richard Healey, Enforcement Branch Manager, DEQ, OWQ (via email)  
Dennis Taylor, Supervisor, ADH Engineering Section, (via email)  
Craig Corder, Engineer Chief, ADH Engineering Section (via email)

**Crist Engineers, Inc.**

205 Executive Court  
 Little Rock, Arkansas 72205  
 Telephone (501) 664-1552  
 Fax (501) 664-8579  
 www.cristengineers.com

**Consulting Engineers**

Matthew D. Dunn  
 Craig A. Johnson  
 Brian N. Wintle

July 7, 2023

VIA E-MAIL: [leslie.allen-daniel@adeq.state.ar.us](mailto:leslie.allen-daniel@adeq.state.ar.us)

Ms. Leslie Allen-Daniel  
 Enforcement Coordinator, DEQ, OWQ  
 5301 Northshore Drive  
 North Little Rock, AR 72118-5317

RE: City of Malvern, Arkansas  
 NPDES Permit No. AR0034126, AFIN 30-00040  
 SSOs: Manholes #154 & #155 at Laurel and Davis – Request for CAP  
 Progress Report 03

Dear Ms. Allen-Daniel:

Progress Report 03 Summary Milestone Schedule is provided in Table 1 below.

Item No.	Corrective Action Description	Target Initiation Date	Target Completion Date	Status
1.	Flow Monitoring and Rainfall Monitoring	March 31, 2023	July 31, 2023	Completed
2.	CCTV Inspection	May 31, 2023	August 31, 2023	Ongoing
3.	Smoke Testing	July 1, 2023	September 30, 2023	Ongoing
4.	Capital Improvement Plan and Schedule of Improvements	September 1, 2023	December 31, 2023	Yet to Commence

**Table 1: Milestone Schedule Status**

Should you have any questions or concerns, please do not hesitate to reach out anytime at 501.664.1552.

Sincerely,  
 Crist Engineers, Inc.

*Matthew D. Dunn* For

Matthew D. Dunn, P.E.  
 President

Cc: Honorable Brenda Weldon, Mayor, City of Malvern (via email)  
 David Coston, General Manager, Malvern Water Works (via email)  
 Carl Wheatley, Superintendent, Malvern Water Works (via email)  
 Richard Healey, Enforcement Branch Manager, DEQ, OWQ (via email)  
 Dennis Taylor, Supervisor, ADH Engineering Section, (via email)  
 Craig Corder, Engineer Chief, ADH Engineering Section (via email)

**Crist Engineers, Inc.**

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Little Rock, Arkansas 72205  
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Fax (501) 664-8579  
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**Consulting Engineers**

Matthew D. Dunn  
Craig A. Johnson  
Brian N. Wintle

October 16, 2023

VIA E-MAIL: [leslie.allen-daniel@adeq.state.ar.us](mailto:leslie.allen-daniel@adeq.state.ar.us)

Ms. Leslie Allen-Daniel  
Enforcement Coordinator, DEQ, OWQ  
5301 Northshore Drive  
North Little Rock, AR 72118-5317

RE: City of Malvern, Arkansas  
NPDES Permit No. AR0034126, AFIN 30-00040  
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Progress Report 04

Dear Ms. Allen-Daniel:

Progress Report 04 Summary Milestone Schedule is provided in Table 1 below.

Item No.	Corrective Action Description	Target Initiation Date	Target Completion Date	Status
1.	Flow Monitoring and Rainfall Monitoring	March 31, 2023	July 31, 2023	Completed
2.	CCTV Inspection	May 31, 2023	August 31, 2023	Completed
3.	Smoke Testing	July 1, 2023	September 30, 2023	Completed
4.	Capital Improvement Plan and Schedule of Improvements	September 1, 2023	December 31, 2023	Ongoing

**Table 1: Milestone Schedule Status**

Should you have any questions or concerns, please do not hesitate to reach out anytime at 501.664.1552.

Sincerely,  
Crist Engineers, Inc.

Matthew D. Dunn, P.E.  
President

Cc: Honorable Brenda Weldon, Mayor, City of Malvern (via email)  
David Coston, General Manager, Malvern Water Works (via email)  
Carl Wheatley, Superintendent, Malvern Water Works (via email)  
Richard Healey, Enforcement Branch Manager, DEQ, OWQ (via email)  
Dennis Taylor, Supervisor, ADH Engineering Section, (via email)  
Craig Corder, Engineer Chief, ADH Engineering Section (via email)

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**Consulting Engineers**

Matthew D. Dunn  
 Craig A. Johnson  
 Brian N. Wintle

January 16, 2023

VIA E-MAIL: [leslie.allen-daniel@adeq.state.ar.us](mailto:leslie.allen-daniel@adeq.state.ar.us)

Ms. Leslie Allen-Daniel  
 Enforcement Coordinator, DEQ, OWQ  
 5301 Northshore Drive  
 North Little Rock, AR 72118-5317

RE: City of Malvern, Arkansas  
 NPDES Permit No. AR0034126, AFIN 30-00040  
 SSOs: Manholes #154 & #155 at Laurel and Davis – Request for CAP  
 Progress Report 05

Dear Ms. Allen-Daniel:

Progress Report 05 Summary Milestone Schedule is provided in Table 1 below.

Item No.	Corrective Action Description	Target Initiation Date	Target Completion Date	Status
1.	Flow Monitoring and Rainfall Monitoring	March 31, 2023	July 31, 2023	Completed
2.	CCTV Inspection	May 31, 2023	August 31, 2023	Completed
3.	Smoke Testing	July 1, 2023	September 30, 2023	Completed
4.	Capital Improvement Plan and Schedule of Improvements	September 1, 2023	April 30, 2024	Ongoing

**Table 1: Milestone Schedule Status**

Finalization of the capital improvement plan and schedule of improvements is dependent on the completion of the 2023 sanitary sewer evaluation survey (SSES) report scheduled to be finished in the spring of 2024.

Should you have any questions or concerns, please do not hesitate to reach out anytime at 501.664.1552.

Sincerely,  
 Crist Engineers, Inc.

Matthew D. Dunn, P.E.  
 President

Cc: Honorable Brenda Weldon, Mayor, City of Malvern (via email)  
 David Coston, General Manager, Malvern Water Works (via email)  
 Carl Wheatley, Superintendent, Malvern Water Works (via email)  
 Richard Healey, Enforcement Branch Manager, DEQ, OWQ (via email)  
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