

# Illinois Environmental Protection Agency

Bureau of Water • 1021 N. Grand Avenue E. • P.O. Box 19276 • Springfield • Illinois • 62794-9276

# Division of Water Pollution Control ANNUAL FACILITY INSPECTION REPORT

for NPDES Permit for Storm Water Discharges from Separate Storm Sewer Systems (MS4)

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Compliance Assurance Section at the above address. Complete each section of this report.

Report Period: From March, 2018 To March, 2	019 Permit No. ILR40 0190								
MS4 OPERATOR INFORMATION: (As it appears on the	MS4 OPERATOR INFORMATION: (As it appears on the current permit)								
Name: CITY OF FAIRVIEW HEIGHTS	Mailing Address 1: 10025 BUNKUM ROAD								
Mailing Address 2:	County: St. Clair								
City: FAIRVIEW HEIGHTS State:	IL Zip: <u>62208</u> Telephone: <u>618-489-2021</u>								
Contact Person: CHRIS VOLKMAN (Person responsible for Annual Report)	Email Address:								
Name(s) of governmental entity(ies) in which MS4 is local	ated: (As it appears on the current permit)								
ILLINOIS DEPARTMENT OF TRANSPORTATION	ST. CLAIR COUNTY								
CANTEEN TOWNSHIP & CASEYVILLE TOWNSHIP	ST. CLAIR TOWNSHIP								
THE FOLLOWING ITEMS MUST BE ADDRESSED.									
<ul> <li>A. Changes to best management practices (check appropriate regarding change(s) to BMP and measurable goals.)</li> </ul>	te BMP change(s) and attach information								
1. Public Education and Outreach 4.	Construction Site Runoff Control								
2. Public Participation/Involvement   5.	Post-Construction Runoff Control								
3. Illicit Discharge Detection & Elimination   6.	Pollution Prevention/Good Housekeeping								
B. Attach the status of compliance with permit conditions, an assessment of the appropriateness of your identified best management practices and progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and your identified measurable goals for each of the minimum control measures.									
C. Attach results of information collected and analyzed, inclu									
<ul> <li>D. Attach a summary of the storm water activities you plan to implementation schedule.)</li> </ul>	undertake during the next reporting cycle ( including an								
E. Attach notice that you are relying on another government	entity to satisfy some of your permit obligations (if applicable).								
F. Attach a list of construction projects that your entity has pa	aid for during the reporting period.								
Any person who knowingly makes a false, fictitious, or fraudul commits a Class 4 felony. A second or subsequent offense after a committee of the committee of t									
CHRIS VOLKMAN, P.E.	CITY ENGINEER								
Printed Name:	Title:								

EMAIL COMPLETED FORM TO: epa.ms4annualinsp@illinois.gov

or Mail to: ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

WATER POLLUTION CONTROL

COMPLIANCE ASSURANCE SECTION #19 1021 NORTH GRAND AVENUE EAST

POST OFFICE BOX 19276

SPRINGFIELD, ILLINOIS 62794-9276

# ADMINISTRATIVE REVISIONS TO THE NOTICE OF INTENT

Revisions to the original Notice of Intent (NOI) are reflected below.

MS4 Operator Mailing Address:	Yes	No <u>X</u>
Persons Responsible:	Yes	No <u>X</u>
Name:		
Title:		
Telephone Number:		
Area of Responsibility:		

## Introduction

In 2003, St. Clair County (County), Illinois and its communities created a Co-Permittee Group to join forces in complying with the National Pollutant Discharge Elimination System (NPDES) for Municipal Separate Storm Sewer Systems (MS4) Phase II requirements. As stated in the original 2003 Notice of Intent (NOI), the County and the Co-Permittee communities were to pool resources and work together to comply with the commitments made within the NOI for the benefit of all within the County.

The Co-Permittee Group was active during this reporting period. Significant progress was made sharing Best Management Practices (BMPs) for document retention, operation procedures, and maintenance activities.

## Best Management Practice (BMP) Summary of 2018-2019 Activities

In 2003, each member of the Co-Permittee Group submitted a NOI in compliance with the first 5-year cycle. In 2008, a NOI was submitted in compliance with the next 5-year cycle, as written in the first MS4 permit. The 2009 NOI was submitted in compliance with additional requirements in the second MS4 permit. In 2013, a new NOI was submitted for the next 5-year cycle and was in place starting in March 2014. As stated in the 2003, 2008, 2009, and 2013 NOIs, each Co-Permittee Member identified certain activities to comply with the Phase II requirements. Below is an abbreviated summary of the BMPs that were written in the NOI for each of the minimum control measures.

### March 2018-February 2019:

- 1) **A.1-** Stormwater brochures for businesses, homeowners, children, and green infrastructures were to be promoted and displayed by each community in a public place.
- 2) **A.4-** St. Clair County sponsored a booth at the County Fair and/or Earth Day and distributed the stormwater and green infrastructure brochures.
- 3) **A.5** St. Clair County posted newsletters on the County Health Department website during school months. Co-Permittee Members distributed educational materials to schools in their communities. The amount of material distributed was to be tracked by the communities.
- 4) **B.3** The Co-Permittee Group met three (3) times to review upcoming permit requirements, notice of intent, review stormwater management program, operations training, and to develop and submit the Annual Report.
- 5) **B.5-** Co-Permittee Members solicited and encouraged public assistance in monitoring the community's storm water system. Public inquiries and complaints were responded to and recorded.
- 6) **B.6-** St. Clair County continued to promote programs related to stormwater activities and recycling programs. The community tracked its participation.

IEPA Annual Report for NPDES Permit for Stormwater Discharges from MS4 - Report Period: March 2018 through February 2019.

- 7) **C.1-** Co-Permittee Members updated any new or revised storm sewers and performed stream observations at bridge inspections.
- 8) **C.5-** A survey of previously installed stencils was to be performed as well as replacing or placing any that needed inlet stencils.
- 9) **C.6-** Communication brochures were distributed to the community. Co-Permittee Members discussed any known illicit discharge ordinance compliance issues in the communities.
- 10) **C.9-** Co-Permittee Members developed brochures addressing specific storm water ordinance prohibited activities and distributed with educational brochures.
- 11) **D.1, E.2, E.4-** Community stormwater ordinances were to be updated, if needed, and require a SWPPP on site plans disturbing more than one acre.
- 12) **D.2, F.1-** The Co-Permittee held an Operations Training class. Topics included a review of the Best Management Practices, Good Housekeeping, and a review of some of the public awareness BMPs other communities use.
- 13) **D.5-** St. Clair County continued to maintain a stormwater hotline number to address public concerns related to stormwater issues. County tracked and reported the number of calls.
- 14) **F.6-** Communities reviewed operating procedures and BMPs and modified if necessary.

The following pages highlight changes made to the BMPs from the NOI, BMP status, and activities planned for the next reporting year. Additional information is also provided from the County and each Community.

It is to be noted that some BMPs will continue on to the next NOI, but some will be stopped, and others added to fulfill the requirements of the permit. The 2014-2019 NOI can be found on the IEPA website.

City of Fairview Heights FOIA Officer for the reporting year:

Name:	Cathy Bryant	
Title: _	Clerks Supervisor	
Telepho	one Number: (618) 489-2000	

	IEPA Annual Report for Stormwater Discharges from MS4 Communities- Period: March 2018 through February 2019							
any changes to the BMPs?		B. The status of compliance with the permit, the appropriateness of the BMP and progress towards achieving reduction of discharged pollutants to the MEP, and identified measurable goals for each of the	C. Provide results of information collected and analyzed, including monitoring data. Information attached?			D. Summarize the stormwater activities you plan to undertake with an implementation schedule		
Comment	YES	minimum control measures.	If attached information, describe.	YES	9	Activity	Schedule	
		ed Paper Materials- Informational Brochures						
Milestone For Reporti	ng	Year: Promote the availability of brochures to the resident	S.	1				
		The City has brochures available to residents at the City Hall and the Public Library. One hundred were distributed. Educational topics in the past have included illicit discharge compliance and stormwater ordinances.			X	St. Clair County has updated brochures available to all county residents in the St. Clair County Health Department.	On-going through 2019-2020 permit year.	
		ity Event- Sponsor Annual Booth at the Earth Day Fes						
Milestone For Reporti	ng	Year: St. Clair County sponsored a booth at the Earth Day	/ Celebration.					
		St. Clair County sponsored a booth and distributed stormwater materials at the Health Department Earth Day Celebration in April 2018. Approximately 100 stormwater brochures were distributed.			Х	St. Clair County is responsible for the booth and tracking the number of brochures handed out.	The 2019 Earth Day event will be in May.	
BMP No. A.5- Classr	00	m Education Material						
Milestone For Reporti	ng	Year: Communities distributed educational materials and	tracked the number of bro	chu	res	and other materials handed out to	he schools.	
		St. Clair County posted educational newsletters on the Health Department's Website.	Review of Classroom Education Materials- See page 11	X		The communities will inform local schools that the newsletters are available on the Health Department's Website.	On-going through 2019-2020 permit year.	

	IEPA Annual Report for Stormwater Discharges from MS4 Communities- Period: March 2018 through February 2019							
A. Changes to Best Management- Were there any changes to the BMPs?		B. The status of compliance with the permit, the appropriateness of the BMP and progress towards achieving reduction of discharged pollutants to the MEP, and identified measurable goals for each of the				<b>D.</b> Summarize the stormwater activities you plan to undertake with an implementation schedule		
Comment	YES		If attached information, describe.	YES	ON N	Activity	Schedule	
		der's Meeting- Coordinate Meetings and Annual Report		nd s	ubr	nit the Annual Report.		
		Co-Permittee Meetings were held on Feb. 22nd, May 3rd, and October 25th, 2018. Annual reports were provided to communities in May 2018 and submitted to IEPA before June 1st, 2018. Meeting topics included: Annual Reporting, Urban Flood Awareness, and Operations Training. The community did not attend all the meetings but was provided the presentation which was discussed with the employees.			x	The City will continue to meet with the Co-Permittee Group to share BMPs and training opportunities. The Co-Permittee Group has planned three compliance/training activities for 2019.	On-going through 2019-2020 permit year.	
		r Monitoring- Solicit and Encourage Public Assistance Year: Community will work to involve more public assistance					ater Hotline	
		The County updated brochures and its website with the County contact information for the reporting of stormwater issues. Any calls or emails will be recorded and addressed.			X	The community will continue to respond to and record all public complaints of illicit discharge and/or dumping and storm water issues.	On-going through 2019-2020 permit year.	
		Coordination- Participate in programs targeted at publes of the county continued to promote programs related to promote programs.						
		County will continue to promote programs related to stormwater activities and recycling. Multiple media outlets will be used to communicate with municipalities.	Review of Community Events - See page 11	X		County will continue to promote programs related to stormwater activities. Multiple media outlets will be used to communicate with municipalities.	On-going through 2019-2020 permit year.	

PERMIT #: *ILR400190* 

COMMUNITY NAME: City of Fairview Heights

	IEPA Annual Report for Stormwater Discharges from MS4 Communities- Period: March 2018 through February 2019							
Management- Were there appropriateness any changes to the achieving reduce		re	appropriateness of the BMP and progress towards achieving reduction of discharged pollutants to the				<b>D.</b> Summarize the stormwater activities you plan to undertake with an implementation schedule	
Comment	YES	9	minimum control measures.	If attached information, describe.	YES	ON	Activity	Schedule
			ic Involvement - the community will provide a public			_		
Milestone for Report	ing	Ye	ear: The communities will provide a public meeting annua	lly for public input for the N	ИS4	pro	ogram.	
		X	The County held a public input meeting regarding the adequacy of the MS4 Program	Review of Other Public Involvement - See page 11	Х		Community will continue to hold a public meeting to solicit public input regarding the adequacy of the MS4 program.	On-going through 2019-2020 permit year.
			er Map Preparation					
<u>Milestone for Report</u>	ing	Ye	ar: Co-Permittee member communities reviewed outfall	maps and conducted stre	am	obs	ervations annually at bridge inspect	ions.
		Х	Co-Permittee communities reviewed their outfall maps for completeness and updated them if necessary. Fairview Heights currently has 100% of outfall locations and names of receiving waters mapped.			X	Communities will begin to update their storm system maps to include modifications to the system.	On-going through 2019-2020 permit year.
			latory Control Program- Ordinance language for Illici		cati	on		
Milestone for Report	ing	Ye	ear: Communication brochures were distributed to the con	nmunity.				
		Х	St. Clair County distributed brochures at the Earth Day event and has them available at the City Hall. The City did not require updates to ordinances over the reporting year.			X	This BMP will not continue into the next NOI.	
BMP No. C.5- Inlet								
Milestone for Report	ing	Ye	ar: Survey condition of inlet stencils.					
		Х	Fairview Heights assessed the condition of the stencils. Currently 100% of the inlets are marked. The community currently has 100 stencils in stock.	Review of Illicit Source Removal Procedures - See page 11	Х		Communities will survey samples of stencils previously installed, replace ones that need to be replaced, and assure all new inlets are installed with stencils.	On-going through 2019-2020 permit year.

		IEPA Annual Report for Stormwater Discharges from MS	64 Communities- Period: Marc	ch	2018 through February 2019		
			<b>C.</b> Provide results of information collected and analyzed, including monitorin data. Information attached?	ng		<b>D.</b> Summarize the stormwater activities you plan to undertake with an implementation schedule	
Comment	YES	minimum control measures.	If attached information, describe.	2	Activity	Schedule	
BMP No. C.6- Progra	am	Evaluation and Assessment					
Milestone for Reporting	ng	Year: Perform illicit discharge detection and elimination in	the Community's stormwater	S	/stem.		
		Communities will perform stream observations during X their annual bridge inspections and take appropriate action if any illicit discharge is found.		)	Communities will continue to perform stream observations and address illicit discharge per the community ordinance.	On-going through 2019-2020 permit year.	
BMP No. C.9- Public							
Milestone for Reporting	ng	Year: Community will update ordinance brochure.					
		Brochures will be updated to address spcific stormwater ordinance prohibited acivities and distributed with brochures addressed in BMP A1.		)	Ordinance brochures will be updated and distributed to the community throughout years 2015-2019	Brochure to be updated in 2019-2020 reporting year.	
BMPs No. D.1, E.2, a	anc	E.4- Site Plan and Pre-Construction Review Procedur	es				
Milestone for Reporting	ng	Year: Update stormwater ordinance.					
		X Stormwater ordinance updates were not required this reporting year.		)	This BMP will not continue into the next NOI.		
		ory Control Program					
Milestone for Reporting	ng	Year: Require SWPPP on all site plans disturbing more tha	n one acre of land inside the	Co	ommunity.		
		The community will require SWPPP on sites disturbing over 1 acre and enforce ordinance provisions.			The community will continue to require SWPPP on sites  disturbing over 1 acre and verify the proper use of sediment and erosion control techniques.	On-going through 2019-2020 permit year.	

	IEPA Annual Report for Stormwater Discharges from MS	S4 Communities- Period: Marc	ch 2	2018 through February 2019		
A. Changes to Best Management- Were there any changes to the BMPs?	<b>B.</b> The status of compliance with the permit, the appropriateness of the BMP and progress towards achieving reduction of discharged pollutants to the MEP, and identified measurable goals for each of the	C. Provide results of information collected and analyzed, including monitoring data. Information attached?		<b>D.</b> Summarize the stormwater activities you plan to undertake with an implementation schedule		
Comment S S	minimum control measures.	If attached information, describe.		Activity	Schedule	
BMP No. D.2- Erosion a	nd Sediment Control BMPs					
Milestone for Reporting Ye	ear: Community will participate in BMP training during An	nual Operations Training.				
X	The community participated in BMP training during the Annual Operations Training on October 25, 2018.		X	Community will continue to participate in BMP training.	On-going through 2019-2020 permit year.	
BMP No. D.5- Stormwate						
-	ear: County continued to maintain a stormwater hotline nu	imber to address public conce	rns	related to stormwater issues. Coul	nty tracked and	
reported the number of ca	lls.	· · · · · · · · · · · · · · · · · · ·				
X	St. Clair County received one hotline call during the reporting period. Communities respond to complaints of residents for stormwater related issues.		X	County and Communities will respond to calls and emails for stormwater issues.	On-going through 2019-2020 permit year.	
BMPs No. D.6 and E.5- T	raining for Construction Site Inspectors					
Milestone for Reporting Ye	ear: Inspector training was not provided this year.					
X	Construction Site Inpsector Training was not needed.		X	The last Construction Site Inpection training took place in April 2017. This BMP will not continue into the next NOI.		
BMP No. E.2- Regulatory						
Milestone for Reporting Ye	ear: Enforce Stormwater Ordinance.					
X	Communities will continue to enforce their stormwater ordinance and track changes made to the ordinance.		X	Communities will continue to enforce their stormwater ordinance.	On-going through 2019-2020 permit year.	

IEPA Annual Report for Stormwater Discharges from MS4 Communities- Period: March 2018 through February 2019						
A. Changes to Best Management- Were there any changes to the BMPs?	B. The status of compliance with the permit, the appropriateness of the BMP and progress towards achieving reduction of discharged pollutants to the MEP, and identified measurable goals for each of the	C. Provide results of information collected and analyzed, including monitorin data. Information attached?		<b>D.</b> Summarize the stormwater activities you plan to undertake with an implementation schedule		
Comment $S$	minimum control measures.	If attached information, describe.	ON	Activity	Schedule	
	ruction Review of BMP Designs					
Milestone for Reporting Y	ear: Review post construction BMPs.					
>	The community will require and review SWPPPs on site plans disturbing more than one (1) acre of land.		Χ	Communities will review the post construction BMPs on all sites that disturb more than one acre in land.	On-going through 2019-2020 permit year.	
BMP No. F.1- Employee						
Milestone for Reporting Y	ear: The Co-Permittee held an Operations Training class.					
>	Training focused on a review of the Best Management Practices, Good Housekeeping, and the Storm Water Management Plan. The City of Fairview Heights attended operations training. Green infrastructure ideas and practices were discussed at other Co-Permittee meetings and in monthly newsletters distributed to community representatives.		X	The Co-Permittee Group will continue holding an Operations Training class as part of education requirements.	On-going through 2019-2020 permit year.	
BMP No. F.6- Other Mur	nicipal Operations Controls- Standard Operating Proc	edures				
Milestone for Reporting Y	ear: Communities reviewed operating procedures and BN	MPs and modified if necessary	<b>'</b> .			
<b> </b>	Stormwater operation procedures for the street department were reviewed and modified in April 2018.		X	Operation procedures are reviewed annually. Co-Permittee meetings will include reference to review and update requirements.	On-going through 2019-2020 permit year.	

COMMUNITY NAM	ME: City of Fairview Heights PERMIT #: ILR400190
	IEPA Annual Report for Stormwater Discharges from MS4 Communities- Period: March 2018 through February 2019
	ADDITIONAL INFORMATION
MP A.5	lassroom Educational Materials
ea	he County has taken steps to educate school children on the severity of stormwater pollution. The St. Clair County Health Department issues a newsletter ach month and it is posted on the St. Clair County Health Department's website. The newsletter consists of articles for students with a wide range of collution topics, including stormwater. The newsletter also lists upcoming recycling events and schools that have won past recycling contests.
MP B.6	ommunity Events - Recycling Programs
te	hroughout the year, St. Clair County sponsored community events that potentially could positively impact stormwater quality. These activities include elephone book recycling and an ongoing "Clean Sweep" program. Telephone book recycling was sponsored by Illinois American Water. The county website so has a brochure listing recycling sites for over 29 different materials.
Fa	airview Heights provides Christmas tree recycling for its community members.
MP B.7 <u>O</u>	ther Public Involvement
m	t. Clair County held a public meeting to provide for public input regarding the adequacy of the MS4 program. The public is encouraged to assist in conitoring the community's storm water system by reporting illegal dumping and discharge or storm water issues either directly to the City or through the county. The St. Clair County storm water hotline number is posted on its website and is provided in educational brochures.
MP C.5	licit Source Removal Procedures

The St. Clair County Highway Department sponsors an Adopt-a-Highway Program throughout the County. By sponsoring this program, St. Clair County is eliminating a significant source of stormwater pollution by keeping trash out of streams and keeping road ditches clear of debris for storm events.

## ADDITIONAL COMMUNITY ACTIVITIES

(Make additional copies of form, as necessary)

Community Name: City of Fairview Heights Permit #: ILR400190

List any additional community-sponsored activities performed between March 2018 and February 2019 not listed in *Notice of Intent (NOI)* submittal, but which addresses one of the six minimum control measures:

One 40-cubic yard dumpster was used by the City for trash retrieved from road ditches and waterways. The dumpster was emptied monthly.

Forty-eight (48) catch basins were cleaned since March 2018.

Street sweeping was performed for 1380 hours and collected approximately 140,000 pounds of debris.

A total of 5 miles were graded along Holy Cross Rd., Baldus, Cliff, Pleasant View, 2<sup>nd</sup> St., South, Autumn, MaryAnn, Roselawn, Leo, Annex, Lynwood, and Pleasant Ridge. The BMPs used included straw mats, riprap, silt fence, and hydroseeding. Five miles of ditches were cleaned removing two truckloads of trash and five truckloads of limbs.

The City of Fairview Heights Public Works sponsored three city-wide bulk trash pickups during the year, collecting thirty-one 40-cubic yard dumpsters of waste. The City also provides year-round recycling through Phoenix Recycling, including Christmas trees.

Fairview Heights cleaned one mile of Ogles Creek and Little Canteen Creek over five days gathering one truckload of trash, 100 pounds of tires, and three truckloads of limbs.

The City is developing a process to assess the water quality impacts of flood management projects affecting the municipality.

Circle which minimum control measure addressed:

- 1. Public Education and Outreach
- 2 Public Participation/Involvement
- (3) Illicit Discharge Detection & Elimination
- 4. Construction Site Runoff Control
- Post-Construction Runoff Control
- 6. Pollution Prevention/Good Housekeeping

## C. Information Collected and Analyzed during 2018-2019 Reporting Year

The NPDES permit effective March 1, 2016, requires MS4 permittees serving populations over 25,000 persons to conduct quarterly laboratory testing of storm water discharge. St. Clair County, the City of O'Fallon, O'Fallon Township, Fairview Heights, and Caseyville Township banded together to share sampling costs and data. The partnership began storm water sampling during the first quarter of 2017. The samples were taken to a local accredited laboratory and tested for Fecal Coliform, Oil & Grease, Total Nitrogen, Total Phosphorous, Total Suspended Solids, and Chloride. The laboratory returned a reporting package that contains laboratory results and chain of custody forms in addition to standard report contents.

The partnership identified two locations for sampling each quarter within 48 hours of a ¼ inch or greater rainfall event in a 24-hour period. If a sample cannot be taken during the quarter, an explanation will be provided. The storm water monitoring program will help evaluate the effectiveness of BMPs implemented to reduce pollutant loadings and water quality impacts. When trends in the data are identified, BMPs can be adjusted accordingly.

The laboratory reporting forms and information collected are attached. Sampling outfall locations for the upcoming reporting year will be:

- Ogles Creek at Old Collinsville Rd (northeast side of creek) ID Upstream Approximate coordinates 89° 57' 58.19" W 38° 35' 49.50" N
- Ogles Creek at Scott Troy Rd (northeast side of creek) ID Downstream Approximate coordinates 89° 52' 28.29" W 38° 38' 59.50" N

## **E.** Reliance on Government Entities for Permit Obligations

Co-Permittee cooperation with the County

# F. List of Construction Projects during 2018-2019 Reporting Year

The City had no public construction projects during the reporting year.

AP ACCREC

WorkOrder: 18021191



March 01, 2018

Jennifer Gerwitz RJN Group 2000 South 8th St. St. Louis, MO 63104 TEL: (314) 588-9764

FAX:

**RE:** NPDES/15-3069 SCC

Dear Jennifer Gerwitz:

TEKLAB, INC received 2 samples on 2/20/2018 11:30:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Marvin L. Darling

Project Manager (618)344-1004 ex 41

mdarling@teklabinc.com

Mowin L. Darling II



# **Report Contents**

http://www.teklabinc.com/

Client: RJN Group Work Order: 18021191
Client Project: NPDES/15-3069 SCC Report Date: 01-Mar-18

### This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	4
Accreditations	5
Laboratory Results	6
Receiving Check List	8
Chain of Custody	Appended



#### **Definitions**

http://www.teklabinc.com/

Client: RJN Group Work Order: 18021191
Client Project: NPDES/15-3069 SCC Report Date: 01-Mar-18

#### Abbr Definition

- \* Analytes on report marked with an asterisk are not NELAP accredited
- CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
  - DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.
- DNI Did not ignite
- DUP Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.
- ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
- IDPH IL Dept. of Public Health
- LCS Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).
- LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
- MDL Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
- MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
- MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MW Molecular weight
- ND Not Detected at the Reporting Limit

#### NELAP NELAP Accredited

- PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).
- RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
- RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
- SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
- Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
- TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
- TNTC Too numerous to count ( > 200 CFU )

#### **Qualifiers**

- # Unknown hydrocarbon
- E Value above quantitation range
- I Associated internal standard was outside method criteria
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits
- X Value exceeds Maximum Contaminant Level

- B Analyte detected in associated Method Blank
- H Holding times exceeded
- M Manual Integration used to determine area response
- R RPD outside accepted recovery limits
- T TIC(Tentatively identified compound)



## **Case Narrative**

http://www.teklabinc.com/

Work Order: 18021191

Report Date: 01-Mar-18

Client: RJN Group Client Project: NPDES/15-3069 SCC

Cooler Receipt Temp: 15.82 °C

### Locations

	Collinsville		Springfield		Kansas City
Address	5445 Horseshoe Lake Road	Address	3920 Pintail Dr	Address	8421 Nieman Road
	Collinsville, IL 62234-7425		Springfield, IL 62711-9415		Lenexa, KS 66214
Phone	(618) 344-1004	Phone	(217) 698-1004	Phone	(913) 541-1998
Fax	(618) 344-1005	Fax	(217) 698-1005	Fax	(913) 541-1998
Email	jhriley@teklabinc.com	Email	KKlostermann@teklabinc.com	Email	jhriley@teklabinc.com
Collinsville Air			Chicago		
Address	5445 Horseshoe Lake Road	Address	1319 Butterfield Rd.		
	Collinsville, IL 62234-7425		Downers Grove, IL 60515		
Phone	(618) 344-1004	Phone	(630) 324-6855		
Fax	(618) 344-1005	Fax			
Email	EHurley@teklabinc.com	Email	arenner@teklabinc.com		



# **Accreditations**

### http://www.teklabinc.com/

Client: RJN Group Work Order: 18021191

Client Project: NPDES/15-3069 SCC Report Date: 01-Mar-18

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2019	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2018	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2018	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2018	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2018	Collinsville
Arkansas	ADEQ	88-0966		3/14/2018	Collinsville
Illinois	IDPH	17584		5/31/2019	Collinsville
Indiana	ISDH	C-IL-06		1/31/2019	Collinsville
Kentucky	KDEP	98006		12/31/2018	Collinsville
Kentucky	UST	0073		1/31/2019	Collinsville
Louisiana	LDPH	LA170027		12/31/2018	Collinsville
Missouri	MDNR	930		1/31/2019	Collinsville
Missouri	MDNR	00930		5/31/2019	Collinsville
Oklahoma	ODEQ	9978		8/31/2018	Collinsville
Tennessee	TDEC	04905		1/31/2019	Collinsville



# **Laboratory Results**

http://www.teklabinc.com/

Client: RJN Group Work Order: 18021191
Client Project: NPDES/15-3069 SCC Report Date: 01-Mar-18

Lab ID: 18021191-001 Client Sample ID: Upstream

Matrix: AQUEOUS Collection Date: 02/20/2018 10:30

Analyses	Certification	RL Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 22NI	D ED. 9222 D MEMBR	ANE FILTER					
Fecal Coliform	*	100	3100	CFU/100ml	100	02/20/2018 13:16	R243764
EPA 1664A							
Hexane Extractable Material	NELAP	6	< 6	mg/L	1	02/21/2018 13:40	R243818
EPA 600 351.2 R2.0, 353.2 R	2.0						
Nitrogen, Total	*	0.05	1.14	mg/L	1	02/28/2018 0:00	R244064
EPA 600 365.4 (TOTAL)							
Phosphorus, Total (as P)	NELAP	0.050	0.222	mg/L	1	02/28/2018 10:21	139469
<b>STANDARD METHODS 2540</b>	D 1997						
Total Suspended Solids	NELAP	6	123	mg/L	1	02/22/2018 13:16	R243843
<b>STANDARD METHODS 4500</b>	-CL E (TOTAL) 1997						
Chloride	NELAP	10	86	mg/L	2	02/26/2018 15:21	R244103



# **Laboratory Results**

http://www.teklabinc.com/

Client: RJN Group Work Order: 18021191
Client Project: NPDES/15-3069 SCC Report Date: 01-Mar-18

Lab ID: 18021191-002 Client Sample ID: Downstream

Matrix: AQUEOUS Collection Date: 02/20/2018 10:58

Analyses	Certification	RL Qual	Result	Units	DF	Date Analyzed I	Batch
STANDARD METHODS 22ND	ED. 9222 D MEMBR	ANE FILTER					
Fecal Coliform	*	100	1300	CFU/100ml	100	02/20/2018 13:18	R243764
EPA 1664A							
Hexane Extractable Material	NELAP	6	< 6	mg/L	1	02/21/2018 13:40	R243818
EPA 600 351.2 R2.0, 353.2 R2	2.0						
Nitrogen, Total	*	0.05	2.18	mg/L	1	02/28/2018 0:00	R244064
EPA 600 365.4 (TOTAL)							
Phosphorus, Total (as P)	NELAP	0.050	0.286	mg/L	1	02/28/2018 10:23	139469
<b>STANDARD METHODS 2540</b>	D 1997						
Total Suspended Solids	NELAP	6	42	mg/L	1	02/22/2018 13:16	R243843
STANDARD METHODS 4500	-CL E (TOTAL) 1997						
Chloride	NELAP	25	105	mg/L	5	02/27/2018 13:11	R244077



Water - pH acceptable upon receipt?

NPDES/CWA TCN interferences checked/treated in the field?

## **Receiving Check List**

http://www.teklabinc.com/

Work Order: 18021191 Client: RJN Group Client Project: NPDES/15-3069 SCC Report Date: 01-Mar-18 Carrier: Employee Received By: KF Elizabeth a Hurley Reviewed by: Completed by: mbor Dilalli On: On: 20-Feb-18 20-Feb-18 Amber M. Dilallo Elizabeth A. Hurley Extra pages included 0 Pages to follow: Chain of custody Shipping container/cooler in good condition? Yes 🗸 No Not Present Temp °C 15.82 Type of thermal preservation? Ice 🗹 Blue Ice None Dry Ice Chain of custody present? **~** No 🗀 Yes **~** Chain of custody signed when relinquished and received? Yes No L **~** Chain of custody agrees with sample labels? No 🗀 Yes **V** No 🗌 Samples in proper container/bottle? Yes **~** Sample containers intact? Yes No Sufficient sample volume for indicated test? Yes ~ No  $\checkmark$ No 🗌 All samples received within holding time? Yes Field NA 🗸 Lab  $\square$ Reported field parameters measured: Yes 🗹 No  $\square$ Container/Temp Blank temperature in compliance? When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected. No VOA vials 🗸 Water – at least one vial per sample has zero headspace? Yes 📙 No 🗀 No TOX containers Yes No 🗌 Water - TOX containers have zero headspace?

Any No responses must be detailed below or on the COC.

Yes 🗸

Yes

No 🗌

No 🗌

NA 🗸

**CHAIN OF CUSTODY** 

Work order # 18031191

pg. of

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1004 - Fax: (618) 344-1005

Address:							T			2	١				ì		1	-			
1 Ctoto / 7	2000 South 8th St.						Δ	eserve	Preserved in: 🔤 LAB	■ LAB	Ŋ.	HELD			1	ORLA	FOR LAB USE ONLY	ONE			
コージーのになって	ip St. Louis, MO 63104	04					Ľ	Lab Notes:	es:		E B	14 25									
Contact: Jen	Jennifer Gerwitz	Phone:	ne:	(314)	(314) 588-9764	64					¥	Ĺ									
E-Mail: jgen	igerwitz@rjnmail.com	Fax:					<u> </u>	ient C	Client Comments	nts											:
nese samples kno nese samples kno	Are these samples known to be involved in litigation? If Are these samples known to be hazardous? $\ \ \square$ Yes	Are these samples known to be involved in litigation? If yes, a surcharge will apply Are these samples known to be hazardous? $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	ge will a	ylddi	☐ Yes	oN 🔀			ğ	rainfall 0.40 in	0	, <del>4</del> ,	ζ <u>c</u>								
Are there any required reportin limits in the comment section.	I reporting limits to be me section. $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	_	lysis?. I	f yes, p	lease p	rovide															
Project	Project Name/Number	Samp	le Col	lecto	Sample Collector's Name	me		MATRIX	RIX				N N	CAT	II AN	ALYSI	INDICATE ANALYSIS REQUESTED	UEST			
NPDES/15-3069 SCC	25											<u></u>			_						
Results Requested	rcharge)	Billing Instructions		# and Ty	pe of C	Type of Containers				O111	Fecal (	Oil and	Phos	Total 1	Т						
]	3 Day (50% Surcharge)		UN	H2S0			eous			J, 100	Colifor  oride		phoru		SS						
Lab Use Only S	Sample Identification	Date/Time Sampled	T	04_			3				m		S	en							
Son Life icosi	Upstream	02/26/18 10:30	2	7			×			×	×	×	×	×	×				1		
_	Downstream	20/18	2	2			×			×	×	×	×	×	×						
																					- Andrews of the same
R	Relinquished By		٥	Date/Tir	/Time		Н			Rece	Received By	چ			F			Date/Time	ime		
wind Vie	1.8	02/20	sija		11:30			X	20%							4	31/06/	`	1/30		
									<b>}</b>												
ndividual signing 1	this agreement on behalf	The individual signing this agreement on behalf of the client anknowledges that baken has read and understands the terms and conditions of this	dy sect	of he/s	ha hac	one bee	- Sabore	the space	o forms	200	odition.	of this			┨	0 ch+0 0	, F	44200	3	w.7.a	1

agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions.

AP ACCREC

**WorkOrder:** 18050329



May 15, 2018

Jennifer Gerwitz RJN Group 2000 South 8th St. St. Louis, MO 63104 TEL: (314) 588-9764

FAX:

**RE:** NPDES/15-3069

Dear Jennifer Gerwitz:

**RE.** 141 DES/13 3007

TEKLAB, INC received 2 samples on 5/4/2018 9:50:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Marvin L. Darling

Project Manager

(618)344-1004 ex 41

mdarling@teklabinc.com

Mowin L. Darling II



# **Report Contents**

http://www.teklabinc.com/

Client: RJN Group Work Order: 18050329
Client Project: NPDES/15-3069 Report Date: 15-May-18

### This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	4
Accreditations	5
Laboratory Results	6
Receiving Check List	8
Chain of Custody	Appended



#### **Definitions**

http://www.teklabinc.com/

Client: RJN Group Work Order: 18050329

Client Project: NPDES/15-3069 Report Date: 15-May-18

#### Abbr Definition

- \* Analytes on report marked with an asterisk are not NELAP accredited
- CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
- CRQL A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
  - DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
  - DNI Did not ignite
- DUP Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
- ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
- IDPH IL Dept. of Public Health
- LCS Laboratory control sample is a sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
- LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
- MDL "The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
- MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
- MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MW Molecular weight
- ND Not Detected at the Reporting Limit

### NELAP NELAP Accredited

- PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
- RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
- RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
- SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes
- Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
- TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
- TNTC Too numerous to count ( > 200 CFU )

#### **Qualifiers**

- # Unknown hydrocarbon
- C RL shown is a Client Requested Quantitation Limit
- H Holding times exceeded
- M Manual Integration used to determine area response
- R RPD outside accepted recovery limits
- T TIC(Tentatively identified compound)

- B Analyte detected in associated Method Blank
- E Value above quantitation range
- I Associated internal standard was outside method criteria
- ND Not Detected at the Reporting Limit
  - S Spike Recovery outside recovery limits
  - X Value exceeds Maximum Contaminant Level



## **Case Narrative**

http://www.teklabinc.com/

Client: RJN Group Work Order: 18050329
Client Project: NPDES/15-3069 Report Date: 15-May-18

Cooler Receipt Temp: 10.22 °C

Per Jennifer Gerwitz, proceed with Fecal Coliform with the weekend surcharge (Friday receipt). EAH 5/4/18

### **Locations**

	Collinsville		Springfield		Kansas City
Address	5445 Horseshoe Lake Road	Address	3920 Pintail Dr	Address	8421 Nieman Road
	Collinsville, IL 62234-7425		Springfield, IL 62711-9415		Lenexa, KS 66214
Phone	(618) 344-1004	Phone	(217) 698-1004	Phone	(913) 541-1998
Fax	(618) 344-1005	Fax	(217) 698-1005	Fax	(913) 541-1998
Email	jhriley@teklabinc.com	Email	Email KKlostermann@teklabinc.com		jhriley@teklabinc.com
	Collinsville Air Chicago				
Address	5445 Horseshoe Lake Road	Address	1319 Butterfield Rd.		
	Collinsville, IL 62234-7425		Downers Grove, IL 60515		
Phone	(618) 344-1004	Phone	(630) 324-6855		
Fax	(618) 344-1005	Fax			
Email	EHurley@teklabinc.com	Email	arenner@teklabinc.com		



# **Accreditations**

http://www.teklabinc.com/

Client: RJN Group Work Order: 18050329

Client Project: NPDES/15-3069 Report Date: 15-May-18

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2019	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2019	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2018	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2018	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2018	Collinsville
Arkansas	ADEQ	88-0966		3/14/2019	Collinsville
Illinois	IDPH	17584		5/31/2019	Collinsville
Indiana	ISDH	C-IL-06		1/31/2019	Collinsville
Kentucky	KDEP	98006		12/31/2018	Collinsville
Kentucky	UST	0073		1/31/2019	Collinsville
Louisiana	LDPH	LA170027		12/31/2018	Collinsville
Missouri	MDNR	930		1/31/2019	Collinsville
Missouri	MDNR	00930		5/31/2019	Collinsville
Oklahoma	ODEQ	9978		8/31/2018	Collinsville
Tennessee	TDEC	04905		1/31/2019	Collinsville



# **Laboratory Results**

http://www.teklabinc.com/

Client: RJN Group Work Order: 18050329

Client Project: NPDES/15-3069 Report Date: 15-May-18

Lab ID: 18050329-001 Client Sample ID: Upstream

Matrix: AQUEOUS Collection Date: 05/04/2018 8:58

Analyses	Certification	RL Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 22NI	D ED. 9222 D MEMBR	ANE FILTER					
Fecal Coliform	*	10	570	CFU/100ml	10	05/04/2018 13:05	R246753
EPA 1664A							
Hexane Extractable Material	NELAP	6	< 6	mg/L	1	05/09/2018 11:33	R246916
EPA 600 351.2 R2.0, 353.2 R	2.0						
Nitrogen, Total	*	1.05	< 1.05	mg/L	1	05/10/2018 0:00	R246921
EPA 600 365.4 (TOTAL)							
Phosphorus, Total (as P)	NELAP	0.100	< 0.100	mg/L	1	05/09/2018 11:21	141666
STANDARD METHODS 2540	D 1997						
Total Suspended Solids	NELAP	6	< 6	mg/L	1	05/04/2018 14:37	R246759
STANDARD METHODS 4500	-CL E (TOTAL) 1997						
Chloride	NELAP	25	130	mg/L	5	05/11/2018 12:45	R247091



# **Laboratory Results**

http://www.teklabinc.com/

Client: RJN Group Work Order: 18050329

Client Project: NPDES/15-3069 Report Date: 15-May-18

Lab ID: 18050329-002 Client Sample ID: Downstream

Matrix: AQUEOUS Collection Date: 05/04/2018 9:26

Analyses	Certification	RL Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 22ND	D ED. 9222 D MEMBR	ANE FILTER					
Fecal Coliform	*	100	500	CFU/100ml	100	05/04/2018 13:05	R246753
EPA 1664A							
Hexane Extractable Material	NELAP	6	< 6	mg/L	1	05/09/2018 11:33	R246916
EPA 600 351.2 R2.0, 353.2 R	2.0						
Nitrogen, Total	*	1.05	2.59	mg/L	1	05/10/2018 0:00	R246921
EPA 600 365.4 (TOTAL)							
Phosphorus, Total (as P)	NELAP	0.100	0.189	mg/L	1	05/09/2018 11:23	141666
<b>STANDARD METHODS 2540</b>	D 1997						
Total Suspended Solids	NELAP	6	15	mg/L	1	05/04/2018 14:37	R246759
STANDARD METHODS 4500	-CL E (TOTAL) 1997						
Chloride	NELAP	5	43	mg/L	1	05/11/2018 12:47	R247091



Client: RJN Group

## **Receiving Check List**

http://www.teklabinc.com/

Work Order: 18050329

Client Project: NPDES/15-3069 Report Date: 15-May-18 Carrier: Kevin Madden Received By: AMD Elizabeth a thurley Marin L. Darling II Completed by: Reviewed by: On: On: 04-May-18 04-May-18 Elizabeth A. Hurley Marvin L. Darling Extra pages included 0 Pages to follow: Chain of custody Shipping container/cooler in good condition? Yes 🗸 No Not Present Temp °C 10.22 Type of thermal preservation? Ice 🗹 Blue Ice None Dry Ice Chain of custody present? **~** No 🗀 Yes **~** Chain of custody signed when relinquished and received? Yes No L **~** Chain of custody agrees with sample labels? No 🗀 Yes **V** Samples in proper container/bottle? Yes No 🗀 **~** Sample containers intact? Yes No Sufficient sample volume for indicated test? Yes ~ No **✓** No 🗌 All samples received within holding time? Yes NA 🗸 Field Lab  $\square$ Reported field parameters measured: Yes 🗹 No 🗌 Container/Temp Blank temperature in compliance? When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected. No VOA vials 🗸 Water – at least one vial per sample has zero headspace? Yes 📙 No 🗀 No TOX containers Yes No 🗌 Water - TOX containers have zero headspace? Yes 🗹 No 🗌 Water - pH acceptable upon receipt? NA 🗸 NPDES/CWA TCN interferences checked/treated in the field? Yes No 🗌

Any No responses must be detailed below or on the COC.

**CHAIN OF CUSTODY** 

pg. of

Work order # 105033F

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1004 - Fax: (618) 344-1005

Client:	RJN Group			Samples on: 📓 ICE	CE 🔳 BLUE ICE 🏢 NO ICE	ා <sub>ල</sub> <del>උළ`ට</del> \ නා	
Address:	2000 South 8th St.	ļ.		Preserved in:	AB 🛣 FIELD	FOR LAB USE ONLY	
City / State / Zip	/ Zip St. Louis, MO 63104	104		Lab Notes:			
Contact:	Jennifer Gerwitz	Phone:	(314) 588-9764	100 May 11	Mario vy		\ \{
E-Mail:	jgerwitz@rjnmail.com	Fax:		- Client Comments		Client Comments	,  ≥
Are these samples known to be Are these samples known to be Are there any required reportini limits in the comment section.	involved in hazardous g limits to b	n litigation? If yes, a surcharges? ☐ Yes ☒ No e met on the requested analys ☒ No	e will apply 📗 Yes 🔀 No sis?. If yes, please provide		rainfall ,83 in. on 5/3/18	on 5/3/18	2
Pro	Project Name/Number	Sample	Sample Collector's Name	MATRIX	INDICATE	E ANALYSIS REQUESTED	1
NPDES/15-3069							
ฐ	Results Requested	Billing Instructions	# and Type of Containers		Pho il ar		
Standard Other	1-2 Day (100% Surcharge)		H2S/ UN	ueous	Nitroge sphoru nd Grea l Colifor nloride	TSS	
Lab Use Only	Sample Identification	Date/Time Sampled	P 	3	s se		
18m01329~m	Upstream	1415 WHESE B	2 2 2	×	× × × ×	×	
60	Downstream	4.26 AMS/41	1/82 2	×	× × × ×	×	
		A					
	The state of the s	and a septiment of the					
	Relinguished Bv.		Date/Time		Received Rv	Date/Time	
Keuh	Madden		9:50AM 5/4/10		,		
Andh	hony Vitale	05:6	0 AM 5/4/18 5	70W	STORTES TO	5/4/18 GOD	
	/						
The individual sig agreement, and the	ning this agreement on behanat he/she has the authority	half of the client, acknowled; to sign on behalf of the clie	The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions.	nderstands the terms and rerms and rerms and	conditions of this	BottleOrder: 42821	1





August 03, 2018

Jennifer Gerwitz RJN Group 2000 South 8th St. St. Louis, MO 63104 TEL: (314) 588-9764

FAX:

**RE:** NPDES/15-3069



**WorkOrder:** 18071801

Dear Jennifer Gerwitz:

TEKLAB, INC received 2 samples on 7/30/2018 2:28:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Marvin L. Darling

Project Manager

(618)344-1004 ex 41 mdarling@teklabinc.com

Mowin L. Darling II

Page 1 of 8



# **Report Contents**

http://www.teklabinc.com/

Client: RJN Group Work Order: 18071801
Client Project: NPDES/15-3069 Report Date: 03-Aug-18

### This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	4
Accreditations	5
Laboratory Results	6
Receiving Check List	8
Chain of Custody	Appended



#### **Definitions**

http://www.teklabinc.com/

Client: RJN Group Work Order: 18071801
Client Project: NPDES/15-3069 Report Date: 03-Aug-18

#### Abbr Definition

- \* Analytes on report marked with an asterisk are not NELAP accredited
- CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
- CRQL A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
  - DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
  - DNI Did not ignite
- DUP Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
- ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
- IDPH IL Dept. of Public Health
- LCS Laboratory control sample is a sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
- LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
- MDL "The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
- MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
- MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MW Molecular weight
- ND Not Detected at the Reporting Limit

### NELAP NELAP Accredited

- PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
- RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
- RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
- SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes
- Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
- TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
- TNTC Too numerous to count ( > 200 CFU )

#### **Qualifiers**

- # Unknown hydrocarbon
- C RL shown is a Client Requested Quantitation Limit
- H Holding times exceeded
- M Manual Integration used to determine area response
- R RPD outside accepted recovery limits
- T TIC(Tentatively identified compound)

- B Analyte detected in associated Method Blank
- E Value above quantitation range
- I Associated internal standard was outside method criteria
- ND Not Detected at the Reporting Limit
  - S Spike Recovery outside recovery limits
  - X Value exceeds Maximum Contaminant Level



## **Case Narrative**

http://www.teklabinc.com/

Work Order: 18071801

Client: RJN Group Report Date: 03-Aug-18 Client Project: NPDES/15-3069

Cooler Receipt Temp: 14.82 °C

### Locations

	Collinsville		Springfield	<u></u>	Kansas City
Address	5445 Horseshoe Lake Road	Address	3920 Pintail Dr	Address	8421 Nieman Road
	Collinsville, IL 62234-7425		Springfield, IL 62711-9415		Lenexa, KS 66214
Phone	(618) 344-1004	Phone	(217) 698-1004	Phone	(913) 541-1998
Fax	(618) 344-1005	Fax	(217) 698-1005	Fax	(913) 541-1998
Email	jhriley@teklabinc.com	Email	KKlostermann@teklabinc.com	Email	jhriley@teklabinc.com
	Collinsville Air		Chicago		
Address	5445 Horseshoe Lake Road	Address	1319 Butterfield Rd.		
	Collinsville, IL 62234-7425		Downers Grove, IL 60515		
Phone	(618) 344-1004	Phone	(630) 324-6855		
Fax	(618) 344-1005	Fax			
Email	EHurley@teklabinc.com	Email	arenner@teklabinc.com		



Client: RJN Group

TDEC

Client Project: NPDES/15-3069

Tennessee

# **Accreditations**

http://www.teklabinc.com/

Work Order: 18071801

Collinsville

Report Date: 03-Aug-18

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2019	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2019	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2019	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2019	Collinsville
Arkansas	ADEQ	88-0966		3/14/2019	Collinsville
Illinois	IDPH	17584		5/31/2019	Collinsville
Indiana	ISDH	C-IL-06		1/31/2019	Collinsville
Kentucky	KDEP	98006		12/31/2018	Collinsville
Kentucky	UST	0073		1/31/2019	Collinsville
Louisiana	LDPH	LA170027		12/31/2018	Collinsville
Missouri	MDNR	930		1/31/2019	Collinsville
Missouri	MDNR	00930		5/31/2019	Collinsville
Oklahoma	ODEQ	9978		8/31/2018	Collinsville

1/31/2019

04905



http://www.teklabinc.com/

Client: RJN Group Work Order: 18071801

Client Project: NPDES/15-3069 Report Date: 03-Aug-18

Lab ID: 18071801-001 Client Sample ID: Upstream

Matrix: AQUEOUS Collection Date: 07/30/2018 13:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 22NI	D ED. 9222 D MEMBR	ANE FILTER	1					
Fecal Coliform	*	100		CG	CFU/100ml	100	07/30/2018 15:30	R250255
CG-continuous growth that covers	s the whole or part of the	filtration area c	on membr	ane filter which	h makes colon	ies indistir	nguishable	
EPA 1664A								
Hexane Extractable Material	NELAP	6		< 6	mg/L	1	07/31/2018 14:15	R250304
EPA 600 351.2 R2.0, 353.2 R	2.0							
Nitrogen, Total	*	1.05		< 1.05	mg/L	1	08/02/2018 0:00	R250422
EPA 600 365.4 (TOTAL)								
Phosphorus, Total (as P)	NELAP	0.100		0.133	mg/L	1	08/02/2018 13:33	144418
STANDARD METHODS 2540	D 1997							
Total Suspended Solids	NELAP	6	R	9	mg/L	1	07/31/2018 14:20	R250261
Sample and Duplicate RPD meet	the SOP QC criteria for lo	ow level results	s. Data is	reportable.				
<b>STANDARD METHODS 4500</b>	-CL E (TOTAL) 1997							
Chloride	NELAP	5		40	mg/L	1	08/01/2018 13:09	R250396



http://www.teklabinc.com/

Client: RJN Group Work Order: 18071801

Client Project: NPDES/15-3069 Report Date: 03-Aug-18

Lab ID: 18071801-002 Client Sample ID: Downstream

Matrix: AQUEOUS Collection Date: 07/30/2018 14:04

Analyses	Certification	RL (	Qual Result	Units	DF	Date Analyzed	Batch			
STANDARD METHODS 22ND	ED. 9222 D MEMBR	ANE FILTER								
Fecal Coliform	*	100	CG	CFU/100ml	100	07/30/2018 15:30	R250255			
CG-continuous growth that covers	CG-continuous growth that covers the whole or part of the filtration area on membrane filter which makes colonies indistinguishable									
EPA 1664A										
Hexane Extractable Material	NELAP	6	< 6	mg/L	1	07/31/2018 14:15	R250304			
EPA 600 351.2 R2.0, 353.2 R2	2.0									
Nitrogen, Total	*	1.05	1.86	mg/L	1	08/02/2018 0:00	R250422			
EPA 600 365.4 (TOTAL)										
Phosphorus, Total (as P)	NELAP	0.500	0.570	mg/L	1	08/02/2018 13:36	144418			
STANDARD METHODS 2540	D 1997									
Total Suspended Solids	NELAP	15	251	mg/L	2.44	08/01/2018 10:48	R250327			
STANDARD METHODS 4500	-CL E (TOTAL) 1997									
Chloride	NELAP	5	9	mg/L	1	08/01/2018 13:17	R250396			



Client: RJN Group

### **Receiving Check List**

http://www.teklabinc.com/

Work Order: 18071801

Client Project: NPDES/15-3069 Report Date: 03-Aug-18 Carrier: Employee Received By: NH Elizabeth a Hurley Completed by: Reviewed by: Vonn Hamm On: On: 30-Jul-18 30-Jul-18 Nathan Harer Elizabeth A. Hurley Extra pages included 0 Pages to follow: Chain of custody Shipping container/cooler in good condition? Yes 🗸 No Not Present Temp °C 14.82 Type of thermal preservation? Ice 🗹 Blue Ice None Dry Ice Chain of custody present? **~** No 🗀 Yes **~** Chain of custody signed when relinquished and received? Yes No L **~** Chain of custody agrees with sample labels? No 🗀 Yes **V** No 🗌 Samples in proper container/bottle? Yes **~** Sample containers intact? Yes No Sufficient sample volume for indicated test? Yes ~ No **✓** No 🗌 All samples received within holding time? Yes Field NA 🗸 Lab  $\square$ Reported field parameters measured: Yes 🗹 No 🗌 Container/Temp Blank temperature in compliance? When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected. No VOA vials 🗸 Water – at least one vial per sample has zero headspace? Yes 📙 No 🗀 No TOX containers Yes No 🗌 Water - TOX containers have zero headspace? Yes 🗹 No 🗌 Water - pH acceptable upon receipt? NA 🗸 NPDES/CWA TCN interferences checked/treated in the field? Yes No 🗌

Any No responses must be detailed below or on the COC.

CHAIN OF CUSTODY pg. of Work order # 1617180

TEA	TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1004 - Fax: (618) 344-1005	45 Hors	eshoe Lak	e Roa	d - Col	linsvil	le, IL 6	2234 -	Phone	: (618	344	-1004	- Fax:	(618)	344-1	200		
Client:	RJN Group						Samp	Samples on: MCE	DOE	■ BLU	E ICE	ON III		4.2.4	ې			
Address:	2000 South 8th St.						Prese	reserved in:  LAB			3	160	% FOR	THELD ALONG FOR LAB USE ONLY	SE ON!	>		
City / State / Zip	St. Louis, MO 63104	104					Lab Notes:	otes:		Ì	; (A)	152				1		
Contact: Jenni	Jennifer Gerwitz		Phone:	'	(314) 588-9764	4												
E-Mail: jgerw	jgerwitz@rjnmail.com		Fax:				Client	Client Comments	ıts									
Are these samples known to be involved in litigation? If yes, a surcharge will apply Tes X Are these samples known to be hazardous? Yes X No Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section	wn to be involved in liti wn to be hazardous? eporting limits to be m	Iltigation? If ye S? S? Yes See met on the rection	es, a surcharge w X No equested analysis	vill apply	☐ Yes please prov	No vide		Pai.	Rainfall 6,44 7/29/18	6,4	1 7/.	31/68	~					
Project N	☐ Yes Number	02	Sample Collector's Name	Collecto	or's Nam	٩	M	MATRIX				14	7 4 4	MINICATE ANALYSIS BEGINS				
NPDES/15-3069												<u> </u>	7 - X	210 P	COES -			
Results Requested	discourant of the state of the	Billing In	Billing Instructions	# and T	# and Type of Containers	ntainers	Aq		С			Tota			•			
]	1-2 Day (100% Surcharge)			H2S0 UN			ueous		hloride	nd Grea	osphoru	TSS I Nitrog						
Lab Use Only Sa	Sample Identification	Date/Ti	Date/Time Sampled				3					en						
16071801-00  Upstream	ream	1130/14	18 1:38pm	7			×		×	×	×	×						
mod Coo	Downstream	7130119	1	2 2			×		×	×	×	×						
							,											
								-										
Reli	Relinquished By			Date/Tim	- Jan													
(Arthurna)	Mallo		7/80	) / <i>[</i>	DC:C	3			Received by	g By					Date/Time	ime		1
			4120	011	7/2	220				17			1	,	\rac{1}{3}	1		
			*		1			İ	1	7			1	1201		Ser 1708	<b>&gt;</b>	
																		Τ
The individual signing this agreement on behalf of the client, acknowledges that	s agreement on behal	If of the clier	nt, acknowledges	that he/s	he has reg	ad and un	derstands t	he/she has read and understands the terms and conditions of this	nd condit	ions of th	. <u>s.</u>		BottleOrder	Order:	44524	8.58	s	1

agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions.





November 09, 2018

Jennifer Gerwitz RJN Group 2000 South 8th St. St. Louis, MO 63104 TEL: (314) 588-9764

FAX:

**RE:** NPDES/15-3069

Dear Jennifer Gerwitz:

TEKLAB, INC received 2 samples on 11/1/2018 11:15:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Marvin L. Darling

Project Manager

(618)344-1004 ex 41

mdarling@teklabinc.com

Mowin L. Darling II





# **Report Contents**

http://www.teklabinc.com/

Client: RJN Group Work Order: 18110024
Client Project: NPDES/15-3069 Report Date: 09-Nov-2018

#### This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	4
Accreditations	5
Laboratory Results	6
Receiving Check List	8
Chain of Custody	Appended



#### **Definitions**

http://www.teklabinc.com/

Client: RJN Group Work Order: 18110024

Client Project: NPDES/15-3069 Report Date: 09-Nov-2018

#### **Abbr Definition**

- \* Analytes on report marked with an asterisk are not NELAP accredited
- CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
- CRQL A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
  - DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
  - DNI Did not ignite
- DUP Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
- ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
- IDPH IL Dept. of Public Health
- LCS Laboratory control sample is a sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
- LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
- MDL "The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
- MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
- MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MW Molecular weight
- ND Not Detected at the Reporting Limit

#### NELAP NELAP Accredited

- PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
  - RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
- RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
- SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
- Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
- TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
- TNTC Too numerous to count ( > 200 CFU )

#### **Qualifiers**

- # Unknown hydrocarbon
- C RL shown is a Client Requested Quantitation Limit
- H Holding times exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
  - S Spike Recovery outside recovery limits
- X Value exceeds Maximum Contaminant Level

- B Analyte detected in associated Method Blank
- E Value above quantitation range
- I Associated internal standard was outside method criteria
- M Manual Integration used to determine area response
- R RPD outside accepted recovery limits
- T TIC(Tentatively identified compound)



### **Case Narrative**

http://www.teklabinc.com/

Work Order: 18110024

Report Date: 09-Nov-2018

Client: RJN Group Client Project: NPDES/15-3069

Cooler Receipt Temp: 7.22 °C

#### Locations

	Collinsville Springfield		Springfield		Kansas City
Address	5445 Horseshoe Lake Road	Address	3920 Pintail Dr	Address	8421 Nieman Road
	Collinsville, IL 62234-7425		Springfield, IL 62711-9415		Lenexa, KS 66214
Phone	(618) 344-1004	Phone	(217) 698-1004	Phone	(913) 541-1998
Fax	(618) 344-1005	Fax	(217) 698-1005	Fax	(913) 541-1998
Email	jhriley@teklabinc.com	Email	KKlostermann@teklabinc.com	Email	jhriley@teklabinc.com
	Collinsville Air		Chicago		
Address	5445 Horseshoe Lake Road	Address	1319 Butterfield Rd.		
	Collinsville, IL 62234-7425		Downers Grove, IL 60515		
Phone	(618) 344-1004	Phone	(630) 324-6855		
Fax	(618) 344-1005	Fax			
Email	EHurley@teklabinc.com	Email	arenner@teklabinc.com		



### **Accreditations**

http://www.teklabinc.com/

Client: RJN Group Work Order: 18110024

Client Project: NPDES/15-3069 Report Date: 09-Nov-2018

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2019	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2019	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2019	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2019	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2019	Collinsville
Arkansas	ADEQ	88-0966		3/14/2019	Collinsville
Illinois	IDPH	17584		5/31/2019	Collinsville
Indiana	ISDH	C-IL-06		1/31/2019	Collinsville
Kentucky	KDEP	98006		12/31/2018	Collinsville
Kentucky	UST	0073		1/31/2019	Collinsville
Louisiana	LDPH	LA170027		12/31/2018	Collinsville
Missouri	MDNR	930		1/31/2019	Collinsville
Missouri	MDNR	00930		5/31/2019	Collinsville
Tennessee	TDEC	04905		1/31/2019	Collinsville



http://www.teklabinc.com/

Client: RJN Group Work Order: 18110024

Client Project: NPDES/15-3069 Report Date: 09-Nov-2018

Lab ID: 18110024-001 Client Sample ID: Upstream

Matrix: AQUEOUS Collection Date: 11/01/2018 9:51

Analyses	Certification	RL Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 22NI	D ED. 9222 D MEMBR	ANE FILTER					
Fecal Coliform	*	100	3500	CFU/100ml	100	11/01/2018 13:30	R254196
EPA 1664A							
Hexane Extractable Material	NELAP	6	< 6	mg/L	1	11/02/2018 10:35	R254176
EPA 600 351.2 R2.0, 353.2 R	2.0						
Nitrogen, Total	*	1.05	< 1.05	mg/L	1	11/08/2018 0:00	R254443
EPA 600 365.4 (TOTAL)							
Phosphorus, Total (as P)	NELAP	0.100	< 0.100	mg/L	1	11/06/2018 12:21	147451
<b>STANDARD METHODS 2540</b>	D 1997						
Total Suspended Solids	NELAP	6	< 6	mg/L	1	11/02/2018 13:30	R254217
STANDARD METHODS 4500	-CL E (TOTAL) 1997						
Chloride	NELAP	5	25	mg/L	1	11/07/2018 17:18	R254454



http://www.teklabinc.com/

Client: RJN Group Work Order: 18110024

Client Project: NPDES/15-3069 Report Date: 09-Nov-2018

Lab ID: 18110024-002 Client Sample ID: Downstream

Matrix: AQUEOUS Collection Date: 11/01/2018 10:47

Analyses	Certification	RL Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 22ND	D ED. 9222 D MEMBR	ANE FILTER					
Fecal Coliform	*	100	4100	CFU/100ml	100	11/01/2018 13:30	R254196
EPA 1664A							
Hexane Extractable Material	NELAP	6	< 6	mg/L	1	11/02/2018 10:35	R254176
EPA 600 351.2 R2.0, 353.2 R	2.0						
Nitrogen, Total	*	1.05	4.00	mg/L	1	11/08/2018 0:00	R254443
EPA 600 365.4 (TOTAL)							
Phosphorus, Total (as P)	NELAP	0.500	1.07	mg/L	1	11/07/2018 11:28	147485
<b>STANDARD METHODS 2540</b>	D 1997						
Total Suspended Solids	NELAP	6	128	mg/L	1	11/02/2018 13:30	R254217
<b>STANDARD METHODS 4500</b>	-CL E (TOTAL) 1997						
Chloride	NELAP	5	50	mg/L	1	11/07/2018 17:26	R254454



### **Receiving Check List**

http://www.teklabinc.com/

Work Order: 18110024 Client: RJN Group Client Project: NPDES/15-3069 Report Date: 09-Nov-2018 Carrier: Employee Received By: BV Elizabeth a Hurley Completed by: Marin L. Darling II Reviewed by: On: 01-Nov-2018 01-Nov-2018 Marvin L. Darling Elizabeth A. Hurley Extra pages included 0 Pages to follow: Chain of custody Shipping container/cooler in good condition? Yes 🗸 No Not Present Temp °C 7.22 Type of thermal preservation? Ice 🗹 Blue Ice None Dry Ice Chain of custody present? **~** No 🗀 Yes **~** Chain of custody signed when relinquished and received? Yes No L **~** Chain of custody agrees with sample labels? No 🗀 Yes **V** Samples in proper container/bottle? Yes No 🗀 **~** Sample containers intact? Yes No Sufficient sample volume for indicated test? Yes **V** No **✓** No 🗌 All samples received within holding time? Yes NA 🗸 Field Lab  $\square$ Reported field parameters measured: Yes 🗹 No 🗌 Container/Temp Blank temperature in compliance? When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected. No VOA vials 🗸 Water – at least one vial per sample has zero headspace? Yes 📙 No 🗀 Yes No 🗌 No TOX containers Water - TOX containers have zero headspace? Yes 🗹 No 🗌 Water - pH acceptable upon receipt? NA 🗸 NPDES/CWA TCN interferences checked/treated in the field? Yes No 🗌

Any No responses must be detailed below or on the COC.

## CHAIN OF CUSTODY pg. of Work order # 18110024

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1004 - Fax: (618) 344-1005

Client:  Address:  City / State / Zip  Contact:  E-Mail:    Jennifer Gerwitz   Phone:   (314) 588-9764     E-Mail:   jgerwitz@rjnmail.com   Fax:   Client Comments    Are these samples known to be involved in litigation? If yes, a surcharge will apply   Yes   No Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in the comment section.   Yes   No No   No   No   No   No   No   No	
Contact: Jennifer Gerwitz Phone: (314) 588-9764  E-Mail: jgerwitz@rjnmail.com Fax: Client Comments  Are these samples known to be involved in litigation? If yes, a surcharge will apply Yes No  Are these samples known to be hazardous? Yes No  Are there any required reporting limits to be met on the requested analysis?. If yes, please provide	
Contact: Jennifer Gerwitz   Phone: (314) 588-9764	
E-Mail: jgerwitz@rjnmail.com  Fax:  Client Comments  Are these samples known to be involved in litigation? If yes, a surcharge will apply Yes No  Are these samples known to be hazardous? Yes X No  Are there any required reporting limits to be met on the requested analysis?. If yes, please provide	<u>mus</u>
Are these samples known to be involved in litigation? If yes, a surcharge will apply Yes X No  Are these samples known to be hazardous? Yes X No  Are there any required reporting limits to be met on the requested analysis?. If yes, please provide	
Tes I No	
Project Name/Number Sample Collector's Name MATRIX INDICATE ANALYSIS REQUESTED	
NPDES/15-3069	
Results Requested Standard 1-2 Day (100% Surcharge)  Other 3 Day (50% Surcharge)  Billing Instructions # and Type of Containers  ### Add Type	
Lab Use Only Sample Identification Date/Time Sampled	
18110024-col Upstream 11/1/18 9:5/ And 2 2 X X X X X X X X X X X X X X X X X	
002 Downstream 1/1/1810:474m 2 2 X X X X X X X X X X	
	+
	+
	<del>-</del>
Relinquished By Date/Time Received By , Date/Time	
Relinquished By Date/Time Received By Date/Time	
11.13	
1-mg com 1(11/18/1/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/11/18/18	
	***************************************

The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions.

BottleOrder:

46245



