

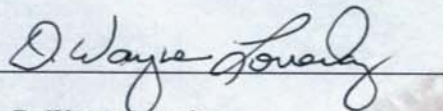


**Third Revised
Reporting, Notification, and Record-Keeping Program**

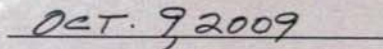
**For Bypasses, Diversions, and Effluent Limit Violations
At KUB-Operated Wastewater Treatment Plants**

**Third Revised Version Posted in the Public Document Repository
October 9, 2009**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



D. Wayne Loveday



Date



Executive Summary

Reporting, Notification, and Record-Keeping Program

The Reporting, Notification, and Record-Keeping Program describes Knoxville Utilities Board's (KUB) protocol for reporting all compliance monitoring data and effluent limit violations as required by the Tennessee Department of Environment and Conservation (TDEC) and the Environmental Protection Agency (EPA). This program specifically addresses reporting, notification, and record-keeping practices for Bypasses, Diversions, and effluent limit violations.

The standard record-keeping procedures and forms contained in this program provide the information required for all Bypasses, Diversions, and effluent limit violations per Section XIX (Reporting Requirements) of the Consent Decree.

The following information is compiled for all Bypasses and Diversions:

- Description of the location of the Bypass or Diversion
- Name of the receiving water
- Volume of the Bypass or Diversion
- Description of the system component that was bypassed or diverted
- Date and time the Bypass or Diversion started and stopped
- Root cause or suspected root cause of the Bypass or Diversion
- Steps taken and/or to be taken to reduce or eliminate the Bypass or Diversion
- Identification of all employees who initiated the Bypass or Diversion
- Documentation of supervisory or managerial approval of the Bypass or Diversion
- The following information is recorded on Wet Weather Checklists as described in the Process Controls Program. During the time of the Bypass or Diversion: Total plant flow, primary clarifier flow, secondary treatment flow, mixed liquor suspended solids, final clarifier sludge blanket depths, and other relevant data, if any.

The Reporting, Notification, and Record-Keeping Program also identifies the requirements for reporting effluent limit violations as required by NPDES Permits, and also to EPA in accordance with Section XIX (Reporting Requirements) of the Consent Decree. This program includes procedures to ensure that all monitoring data and operational records are correctly reported to TDEC and EPA.

The 7 Elements of a Proper MOM Program

KUB's Reporting, Notification, and Record-Keeping Program

1. Utility-Specific

This Reporting, Notification, and Record-Keeping Program describes KUB's protocol for reporting all required compliance monitoring data and effluent limit violations, as required by the TDEC and the EPA.

The program specifically addresses reporting, notification, and record-keeping practices for Bypasses, Diversions, and effluent limit violations at all four KUB wastewater treatment plants (WWTPs):

- Kuwahee
- Fourth Creek
- Loves Creek
- Eastbridge (effluent limit violations only).

2. Purposeful

KUB is committed to meeting all regulatory reporting and Consent Decree requirements. This program describes KUB's protocol for reporting all required compliance monitoring data and effluent limit violations as required by TDEC and EPA. It specifically addresses reporting, notification, and record-keeping practices for Bypasses, Diversions and effluent limit violations. It is purposeful because it provides structure for accurately reporting events to the proper agencies and regulators.

3. Goal-Oriented

The goal of this program is for KUB to achieve accurate and prompt reporting and analysis of individual events, as well as to strengthen our partnership with local, state, and federal agencies and environmental groups as we all work to protect the environment.

4. Uses Performance Measures

The data reported to regulators will be used by KUB to evaluate system performance. That evaluation will drive any corrective action and help direct future improvement projects.

5. Periodically Evaluated

This program is evaluated annually and changed, if necessary, to maintain an accurate and robust method of communication with regulatory agencies and to ensure that KUB gathers and maintains the necessary data to properly evaluate system performance.

6. Available in Writing

The written program will be maintained and kept readily available as a reference for current staff and will be used to train new personnel to ensure all understand and follow the proper procedures. It will also be available in the Public Document Repository for interested customers and others to view.

7. Implemented by Trained Personnel

Employees responsible for the implementation of the Reporting, Notification, and Record-Keeping Program will be initially trained upon employment and on an as needed basis for existing employees on the requirements and methods presented in this document. In addition to meeting regulatory requirements, records of data reported to TDEC and EPA are valuable training, evaluation, and planning tools.

**Reporting, Notification, and Record-Keeping Program
For Bypasses, Diversions, and Effluent Limit Violations
At KUB-Operated Wastewater Treatment Plants**

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Reporting, Notification, and Record-Keeping Program For Bypasses, Diversions, and Effluent Limit Violations At KUB-Operated Wastewater Treatment Plants

1.1 Background

Knoxville Utilities Board (KUB) operates four wastewater treatment plants: Kuwahee, Fourth Creek, Loves Creek, and Eastbridge. The plants receive flow from over 65,000 customers in and around the Knoxville area.

- Kuwahee Wastewater Treatment Plant is an activated sludge facility that includes primary sedimentation, nitrification, final clarification, anaerobic sludge digestion, centrifuge dewatering, and disinfection of all flows. Biosolids from each of the other treatment plants are processed at Kuwahee. This facility was designed and approved for Diversions.
- Fourth Creek Wastewater Treatment Plant is an activated sludge facility that includes primary sedimentation, complete mix activated sludge, final clarification, and disinfection of all flows. This facility was designed and approved for Diversions.
- Loves Creek Wastewater Treatment Plant is an extended aeration activated sludge facility with aeration, final clarification, and disinfection of all flows prior to discharge. This facility was designed and approved for Diversions.
- Eastbridge Wastewater Treatment Plant is a sequencing batch reactor facility and includes disinfection of all flows prior to discharge. This facility does not divert flows.

The Reporting, Notification, and Record-Keeping Program describes KUB's protocol for reporting all compliance monitoring data and effluent limit violations as required by TDEC and the EPA. This program specifically addresses reporting, notification, and record-keeping practices for Bypasses, Diversions, and effluent limit violations. Through the program, KUB achieves accurate and prompt reporting and analysis of individual events.

1.2 EPA Consent Decree Requirements

KUB must report all Bypasses and Diversions to TDEC per the NPDES Permit requirements and to the EPA in accordance with Section XIX of the Consent Decree. Section XIX of the Consent Decree requires for all Bypasses and Diversions the use of standard record-keeping procedures and forms. An appropriate form will be available to all personnel responsible for such record-keeping, and all such personnel will be adequately trained in the record-keeping procedures. The standard forms contain the following information:

1. Description of the location of the Bypass or Diversion
2. Name of receiving water
3. Volume of the Bypass or Diversion
4. Description of the system component that was bypassed or diverted
5. Date and time the Bypass or Diversion started and stopped
6. Root cause or suspected root cause of the Bypass or Diversion
7. Steps taken and/or to be taken to reduce or eliminate the Bypass or Diversion
8. Identification of all employees who initiated the Bypass or Diversion

9. Documentation of supervisory or managerial approval of the Bypass or Diversion
10. The following information is recorded on Wet Weather Checklists as described in the Process Controls Program for the WWTPs. During the time of the Bypass or Diversion: Total plant flow, primary clarifier flow, secondary treatment flow, mixed liquor suspended solids, final clarifier sludge blanket depths, and other relevant data, if any.

KUB must report all effluent limit violations to TDEC per the NPDES Permit requirements and to the EPA in accordance with Section XIX of the Consent Decree. KUB must include all information required in the Discharge Monitoring Report (DMR). This program includes procedures to ensure that all monitoring data and operational records are correctly reported to TDEC and EPA. The program also includes performance measures for ensuring that the information is accurate.

1.3 Reporting, Notification, and Record-Keeping Program Responsible Parties

The table below lists documents that are reportable to TDEC and EPA and documents that are internal records used only by KUB. These documents are either communicated directly to regulatory agencies or combined for reporting.

Document	Responsible Party	Action/Responsibility	Record Location	Records Retention
Labworks Database (Internal record for KUB use only)	Lab Analyst	<ol style="list-style-type: none"> 1. Analyze data and enter onto the LIMS raw data sheet. 2. Enter data from spreadsheet into database 	KUB server	Life of the Consent Decree or 5 years from the date of origination, whichever is longer
TDEC Correspondence	Vice President, LRC Manager, Plant Supervisor, Plant Technician III	<ol style="list-style-type: none"> 1. Compile data surrounding event 2. Write correspondence to TDEC reporting the Bypass, Diversion, or effluent limit violation, cause, and corrective action 	Plants Department drive/Violations and Bypasses/Violations Database and in LRC files	Life of the Consent Decree or 5 years from the date of origination, whichever is longer
EPA Section XIX Correspondence	Consent Decree Regulatory Compliance	<ol style="list-style-type: none"> 1. Report Consent Decree compliance according to Section XIX (CD) 	Consent Decree Regulatory Compliance Files	Life of the Consent Decree or 5 years from the date of origination, whichever is longer
Discharge Monitoring Report (DMR)	Vice President, Plant Manager, LRC Manager, Plant Supervisor, Plant Technician III	<ol style="list-style-type: none"> 1. Compile all DMR data 2. Review data based on Operations Record-Keeping Program for WWTPs procedures 3. Report based on NPDES Permit requirements 	Regulatory Compliance maintains documents for 2 years. After two years the documents are moved to archive at the KUB Concord Street location.	Life of the Consent Decree or 5 years from the date of origination, whichever is longer

Document	Responsible Party	Action/Responsibility	Record Location	Records Retention
Monthly Operating Report (MOR)	Vice President, Plant Manager, LRC Manager, Plant Supervisor, Plant Technician III	<ol style="list-style-type: none"> 1. Compile all MOR data 2. Review data based on Operations Record-Keeping Program for WWTPs procedures 3. Report based on NPDES Permit requirements 	Regulatory Compliance maintains documents for 2 years. After two years the documents are moved to archive at the KUB Concord Street location.	Life of the Consent Decree or 5 years from the date of origination, whichever is longer
Diversion and Bypass Document Checklist and package (Internal record for KUB use only)	Plant Supervisor, Plant Technician III, Shift Plant Technician	<ol style="list-style-type: none"> 1. Compile documents for packet 2. Review checklist for completeness 3. Place into report package that includes data as described in sections 1.4.2 and 1.4.3 in this document. Package includes SCADA report, root cause analysis, necessary trends, daily log, checklist and any other pertinent information. 	WWTP files	Life of the Consent Decree or 5 years from the date of origination, whichever is longer
Diversion Report (Internal record for KUB use only)	Vice President, Plant Manager, Plant Supervisor, Plant Technician III	<ol style="list-style-type: none"> 1. Compile data for report 2. Review report for accuracy based on Operations Record-Keeping Program for WWTPs procedures 3. Enter data into "Treatment Plants – SSO and BBU Reporting" database owned by Department 84. 4. Place into report package 	WWTP files and Plants Department drive	Life of the Consent Decree or 5 years from the date of origination, whichever is longer
Treatment Plant Bypass Report	Vice President, Plant Manager, LRC Manager, Plant Supervisor, Plant Technician III	<ol style="list-style-type: none"> 1. Compile data for report 2. Review report for accuracy based on Operations Record-Keeping Program for WWTPs procedures 3. Report based on NPDES Permit requirements 4. Place into report package 	WWTP files and Departmental drive	Life of the Consent Decree or 5 years from the date of origination, whichever is longer

1.4 Reporting, Notification, and Record-Keeping Program Elements

Effluent Limit Violation

KUB must report all effluent limit violations to TDEC as required by its NPDES Permits and in accordance with Section XIX of the Consent Decree. KUB must include all information required in the Discharge Monitoring Report (DMR).

KUB derives data used to evaluate effluent limit violations from two sources:

- Operational analytical data is collected daily. The Plant Technician reviews the data for operational and NPDES Permit ranges. The technician reports any data outside of the NPDES Permit limits or indicating an unfavorable trend to the Plant Supervisor or supervisory Plant Technician III. Staff enter the data into an Access database, which is queried for report building. This process is described from data entry to reporting in flow chart format (Figure1).
- The KUB Water Quality Assurance Lab analyzes composite and grab samples collected at all WWTPs. The Lab obtains and manages all data in accordance with the requirements and guidance described in the KUB Water Quality Assurance Lab-Quality Assurance Plan. The Operations Record-Keeping Program and the associated Data Verification Plan details how KUB ensures accurate data input and review.

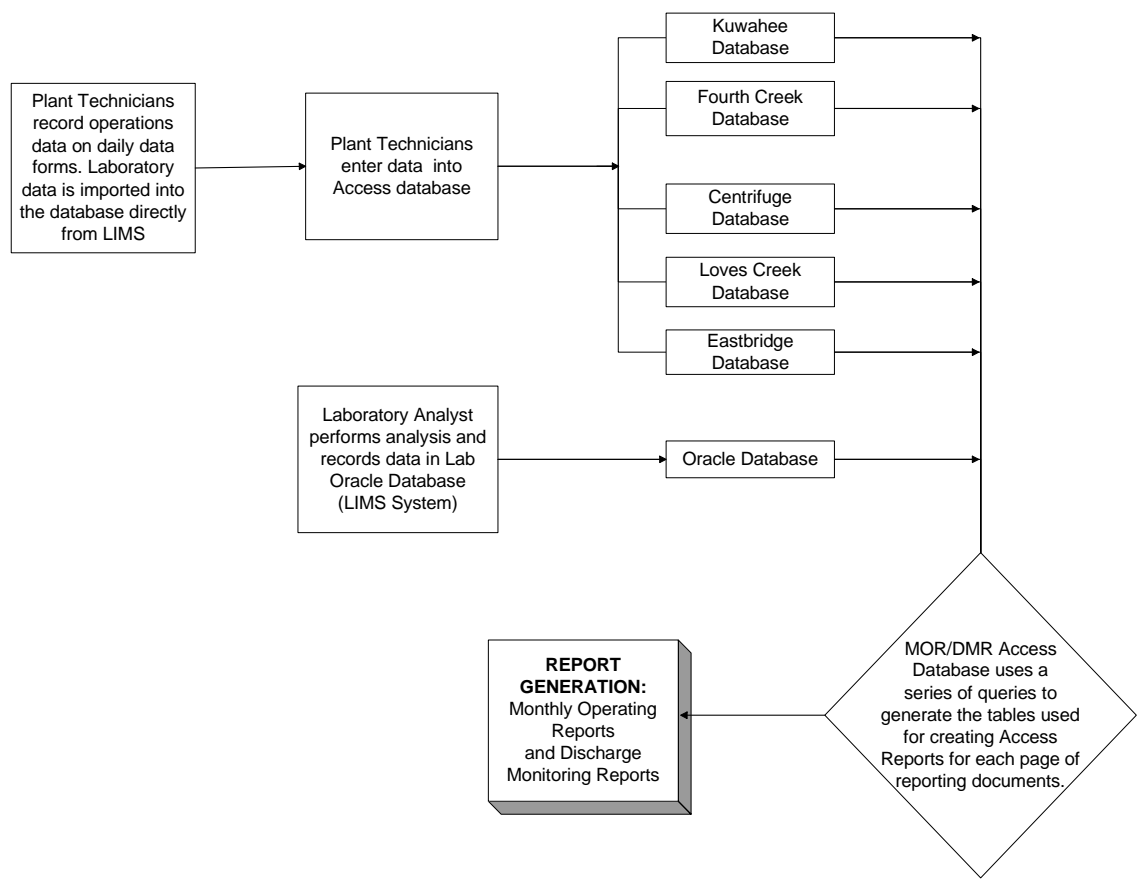
Bypasses

KUB must report all Bypasses to TDEC as required by its NPDES Permit and to the EPA in accordance with Section XIX of the Consent Decree. Section XIX requires the following information for Bypasses: the location, date, time, duration, total Bypass volume, and reason for each Bypass. KUB uses standard record-keeping procedures and forms containing, at a minimum, the items listed in Section 1.2 of this document. The Operations Record-Keeping Program and the associated Data Verification Plan details how KUB ensures accurate data input and review. This process is described from data entry to reporting in flow chart format (Figure 1).

Diversions

KUB must report all Diversions to TDEC as required by its NPDES Permit and to the EPA in accordance with Section XIX of the Consent Decree. Section XIX requires the following information for Diversions: the location, date, time, duration, total Diversion volume, and reason for each Diversion. KUB uses standard record-keeping procedures and forms containing, at a minimum, the items listed in Section 1.2 of this document. The Operations Record-Keeping Program and the associated Data Verification Plan detail how KUB ensures accurate data input and review. This process is described from data entry to reporting in flow chart format (Figure 1).

Figure 1
MOR and DMR Generation Data Flow
Updated 5/25/07



1.4.1 Effluent Limit Violation Reporting, Notification, and Record-Keeping Procedure

I. Internal Notification of Monitoring Violation

1. KUB Water Quality Assurance Laboratory personnel and Plant Technicians review lab and plant data daily for an effluent limit violation in excess of the NPDES Permit limit.
2. All monitoring data and operational records are evaluated for accuracy through the Operations Record-Keeping Program Data Verification Plan for all KUB-operated wastewater treatment plants. All KUB laboratory data is obtained and managed in accordance with the requirements and guidance described in the KUB Water Quality Assurance Lab-Quality Assurance Plan.
3. The Regulatory Compliance (LRC) Manager, Plant Supervisor, and/or designee review the effluent limit violation for any quality control concerns or unusual sampling and analysis conditions.
4. Lab personnel enter the effluent limit violation value into the LIMS database.
5. The lab or plant personnel immediately notify the Vice President, Plant Manager, Supervisors, and critical plant support staff of the violation.

II. Internal Analysis of Monitoring Violation

1. Plant Operations staff assembles, as necessary, and performs a root cause analysis (refer to Appendix 1.5.6) to determine potential causes for violation and corrective actions. Root cause meeting notes are stored electronically on the WWTP operations drive.
2. TDEC correspondence is written based on root cause analysis results. Vice President, LRC Manager, Plant Supervisor, and Plant Technician III review correspondence.

III. Reporting of Monitoring Violation

1. Vice President or LRC Manager corresponds with the local TDEC office via letter to list violation, causes, and corrective actions. This letter is postmarked no later than five (5) business days after the violation notification is issued.
2. Administrative Services files correspondence letter and tabulates the violation value into violation database.
3. Effluent limit violations are reported monthly within the DMR as required by its NPDES Permit.
4. Effluent limit violations are reported to the EPA in accordance with Section XIX of the Consent Decree. Section XIX of the Consent Decree requires for reporting effluent limit violations, that KUB must include all information required to be reported in KUB's DMR.

1.4.2 Bypass Reporting, Notification, and Record-Keeping Procedure

I. Internal Notification of a Bypass

1. Prior to the Bypass event, the Plant Manager and/or the Vice President are notified of the impending possibility of an event. There may be extenuating circumstances, such as power failures, equipment failures, etc., that will not allow notification prior to a Bypass event.
2. Approval from the Plant Manager and/or the Vice President is acquired for the Bypass. There may be extenuating circumstances, such as power failures, equipment failures, etc., that will not allow approval prior to a Bypass event.
3. As the event begins, the Plant Manager and/or the Vice President are notified of the Bypass.
4. Plant Manager or Vice President provides a verbal notice of the Bypass to the Division of Water Pollution Control in the Knoxville Environmental Assistance Center within 24 hours from the time KUB becomes aware of the circumstances.

II. Internal Analysis of a Bypass

1. Plant Technicians begin Bypass Report (refer to Appendix 1.5.4) documentation.
2. All monitoring data and operational records are evaluated for accuracy through the Operations Record-Keeping Program Data Verification Plan for all KUB operated wastewater treatment plants.
3. Bypass Report (refer to Appendix 1.5.4) and Plant SSO Report (refer to Appendix 1.5.5) are completed.
4. Bypass hours and total flow bypassed are entered into the operations database.

III. Reporting of a Plant Bypass

1. Bypass Report (refer to Appendix 1.5.4) and Plant SSO Report (refer to Appendix 1.5.5) are entered into "Treatment Plants – SSO and BBU Reporting" database owned by Department 84. for reporting on monthly SSO report and Plant DMR.
2. Vice President or LRC Manager corresponds with the local TDEC office via letter within five (5) business days of the event to list Bypass totals, causes, and corrective actions.
3. The CSI Team reports data to TDEC in the monthly SSO Report and Plant DMR. Bypasses are reported to TDEC as required in the NPDES Permit and to the EPA in accordance with Section XIX of the Consent Decree. Section XIX requires the following information for plant bypasses: the location, date, time, duration, total Bypass volume, and reason for each Bypass.
4. Bypass packet is completed. This packet includes a document checklist (refer to Appendix 1.5.1), SCADA (Supervisory Control and Data Acquisition) report, Daily Log, wet weather checklist (as described in the

Process Controls Program for the WWTPs), trends, and any other pertinent information. These packets are in paper format and are kept within the WWTP operations files.

5. Bypass Report (refer to Appendix 1.5.4) is kept electronically and in paper format within the WWTP operations files.

1.4.3 Diversion Reporting, Notification, and Record-Keeping Procedure

I. Internal Notification of a Diversion

1. Prior to the Diversion the plant supervisory staff is notified of the impending possibility of an event.
2. Approval for the Diversion follows the guidance described in the Process Control Plan Guidelines.
3. As the event begins, the Plant Supervisor, Plant Manager, and/or the Vice President are notified of the Diversion.

II. Internal Analysis of a Diversion

1. Plant Technicians begin Diversion Report Form (refer to Appendix 1.5.3) documentation.
2. Diversion Report Form (refer to Appendix 1.5.3) is completed and kept electronically. It is stored on the Plant department drive and the data is entered into “Treatment Plants – SSO and BBU Reporting” database owned by Department 84. The CSI team will access this data for reporting in monthly SSO report.

III. Reporting of a Diversion

1. Diversions are reported to TDEC as required in the NPDES Permit and to the EPA in accordance with Section XIX of the Consent Decree. Section XIX requires the following information for Diversions: the location, date, time, duration, total Diversion volume, and reason for each Diversion
2. Diversion packet is completed. This packet includes a document checklist (refer to Appendix 1.5.2), SCADA report, Daily log, wet weather checklist (described in the Process Controls Program for the WWTPs), trends, and any other pertinent information. These packets are in paper format and are kept within the WWTP operations files.
3. Diversion Report Form (refer to Appendix 1.5.3) is kept electronically and in paper format within the WWTP operations files.

1.5 Appendices

Appendix 1.5.1

Bypass Documentation Checklist

KUB WWTP DATE: _____ WWTP: _____
BYPASS DOCUMENTATION PACKAGE CHECKLIST

Purpose: This form serves as a checklist to capture all of the documentation required for compliance record-keeping. KUB fills out a form for each Bypass that occurs at any of the wastewater facilities. KUB maintains all forms and documentation on file at the Kuwahee WWTP and submits them to Collection System Improvement as part of the Bypass Report.

Package Contents: All applicable documents must be included in the package. If a Bypass occurs in more than one 24-hour period, documentation must be included for each successive day. The Technicians will add documents, check off, and initial that they included the documentation. The Operations Technician III / Plant Supervisor reviews the package to ensure that all required documentation is enclosed.

Check As Added To Package and Initial:

Document	Included in Package	Operations Technician Review
Bypass Report	<input type="checkbox"/> _____	<input type="checkbox"/> _____
SCADA Report	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Trends: (a) Influent Flow (b) Bypass Flow	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Wet Weather Checklist	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Daily Log	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Plant Bypass Letter	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Special Notations: List any additional documentation in special notations such as Root Cause Analysis or other reports as applicable:	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Reviewed by Supervisor: _____
 Date Submitted To Collection System Improvement Team: ____/____/____
 Special Notations Concerning Bypass Event: _____

Appendix 1.5.2

Diversion Documentation Checklist

KUB WWTP DATE: _____ WWTP: _____
DIVERSION DOCUMENTATION PACKAGE CHECKLIST

Purpose: This form serves as a checklist to capture all of the documentation required for compliance record-keeping. KUB fills out a form for each Diversion that occurs at any of its wastewater facilities. KUB maintains all forms and documentation on file at the Kuwahee WWTP and submits them to Collection System Improvement as part of the Diversion Report.

Package Contents: All applicable documents must be included in the package. If the Diversion occurs in more than one 24-hour period, documentation must be included for each successive day. The Technicians will add documents, check off, and initial that they included the documentation. The Operations Technician III / Plant Supervisor reviews the package to ensure that all required documentation is enclosed.

Check As Added To Package and Initial:

Document	Included in Package	Operations Technician Review
Diversion Report	<input type="checkbox"/> _____	<input type="checkbox"/> _____
SCADA Report	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Trends: (if applicable) (a) <i>Influent Flow</i> (b) <i>Diversion Flow</i> (c) <i>Biological Flow</i> (d) <i>Primary Clarifier Flow</i> (e) <i>Effluent Suspended Solids</i>	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Wet Weather Checklist	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Daily Log	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Special Notations: List any additional documentation in special notations such as Root Cause Analysis or other reports as applicable:	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Reviewed by Supervisor: _____
 Date Submitted To Collection System Improvement Team: ___/___/___
 Special Notations Concerning Diversion Event: _____

Appendix 1.5.3
Diversion Report Form

KUB WWTP
DIVERSION REPORT

12:00 AM DATE TO 12:00 AM DATE

Supervisory Staff Approving Diversion

Name:

Title:

Designate WWTP where Diversion Occurred with an X

Kuwahee Wastewater Treatment Plant

Tennessee River Mile 646.2. The flows were diverted from the biological treatment/Activated Sludge process

Fourth Creek Wastewater Treatment Plant

Tennessee River Mile 640. The flows were diverted from the biological treatment/Activated Sludge process

Loves Creek Wastewater Treatment Plant

Holston River Mile 5. The flows were diverted from the biological treatment/extended aeration process

ROOT CAUSE FOR THE DIVERSION. Designate with an X

DESIGNATE WITH CAPITAL X

INFLUENT FLOW IN EXCESS OF PLANT'S HYDRAULIC CAPACITY, DUE TO RAINFALL

MECHANICAL OR ELECTRICAL BREAKDOWN OF PLANT EQUIPMENT (PUMPS, ETC.)

OTHER _____

PERSON OR PERSONS INITIATING DIVERSION

IS THIS A CONTINUATION OF THE PREVIOUS DAY'S DIVERSION?

DESIGNATE WITH AN X

NO

YES

 START DATE:

TIME DIVERSION GATE OPEN(ED) =

If this is a continuation, enter hour and date of the original gate opening.

HOUR DATE

TIME DIVERSION GATE WAS CLOSED:

HOUR DATE

PERSON OR PERSONS STOPPING DIVERSION

TOTAL DURATION DIVERTED THIS 24 HOUR PERIOD

HRS

TOTAL GALLONS DIVERTED:

MG

Appendix 1.5.4
Bypass Report Form

**KUB WWTP
BYPASS REPORT**

12:00 AM DATE TO 12:00 AM DATE

VICE PRESIDENT or MANAGER

APPROVING BYPASS

Name:
Title:

Bypass is prohibited unless the following three (3) conditions are met:

1. The Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;
2. There are not feasible alternatives to Bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a Bypass which occurred during normal periods of equipment down-time or preventative maintenance;
3. The permittee submits notice of an unanticipated Bypass to the appropriate field office of the Division of Water Pollution Control within 24 hours of becoming aware of the Bypass (if this information is provided orally, a written submission must be provided within five days). When the need for the Bypass is foreseeable, prior notification shall be submitted to the Director, if possible, at least ten (10) days before the date of the Bypass.

Designate WWTP where Bypass occurred with an X

<input checked="" type="checkbox"/>	Kuwahee Wastewater Treatment Plant
<input type="checkbox"/>	Tennessee River Mile 646.2. During the Bypass, all processes of the WWTP were bypassed
<input checked="" type="checkbox"/>	Fourth Creek Wastewater Treatment Plant
<input type="checkbox"/>	Tennessee River Mile 640. During the Bypass, all processes of the WWTP were bypassed

ROOT CAUSE FOR THE BYPASS. Designate with an X

DESIGNATE WITH CAPITAL X	<input checked="" type="checkbox"/>	INFLUENT FLOW IN EXCESS OF PLANT'S HYDRAULIC CAPACITY, DUE TO RAINFALL
	<input type="checkbox"/>	MECHANICAL OR ELECTRICAL BREAKDOWN OF PLANT EQUIPMENT (PUMPS, ETC.)
	<input type="checkbox"/>	OTHER _____

PERSON OR PERSONS INITIATING BYPASS

IS THIS A CONTINUATION OF THE PREVIOUS DAY'S BYPASS?

DESIGNATE WITH AN X		START DATE:
NO	<input checked="" type="checkbox"/>	<input type="text"/> <input type="text"/>
YES	<input type="checkbox"/>	

TIME BYPASS BEGAN:

HOUR	DATE
<input type="text"/>	<input type="text"/>

TIME BYPASS ENDED:

HOUR	DATE
<input type="text"/>	<input type="text"/>

PERSON OR PERSONS STOPPING BYPASS

TOTAL DURATION BYPASSED THIS 24 HOUR PERIOD

<input type="text"/>	HRS
----------------------	-----

TOTAL GALLONS BYPASSED:

<input type="text"/>	MG
----------------------	----

Appendix 1.5.5

SSO Report – Treatment Plants

SSO Report-Treatment Plants

- Facility and specific site of SSO
 - Kuwahee _____
 - Fourth Creek _____
 - Loves Creek _____
 - Eastbridge _____

Date of Discharge: _____
Initial Time Onset of Discharge: _____
End Time of Discharge: _____
Duration in hours: _____
Estimated Volume: _____
Reason for the Event:

Employee Reporting: _____
STEP: 1 -Call Systems Operations Dispatch and report:
Dispatcher: _____
Date: _____
STEP: 2- Notify Dept. Supervisor of SSO:
Supervisor: _____

Action Taken:

STEP: 3
Enter data into the “Treatment Plants – SSO and BBU Reporting” database owned by Department 84. Confirm via phone with Collection System Improvement within 24-hours or, if discharge is on the weekend, by Monday at 10:00 a.m.

Appendix 1.5.6

Dept. 83 - Root Cause Analysis for Quality Improvement

**Root Cause Analysis
(Location and violation)**

Meeting Held On: **(DATE HERE)**

Follow-Up Deadline On Action Items: **(DATE HERE)**

Event:

Date -

Time -

Observer -

Location -

Reason -

Action Taken -

KUB Responders -

Est. Recovered Volume -

Est. Not Recovered Volume -

Duration -

Water of the State -

Receiving Water -

Photographs -

Action Item	Responsible Party	Action Taken	Date Completed