

CWB
Engineers, Inc.

Designing a Better Arkansas

March 13, 2013

Mr. Alan Anderson
Water Enforcement Branch
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

Re: City Corporation – CAO
Annual Report on Implementation of CMOM
NPDES Permit No. AR0021768
CAO LIS No. 09-146
AFIN 58-00105

Dear Mr. Anderson,

I am pleased to submit the enclosed Capacity, Management, Operation, and Maintenance (CMOM) program update on behalf of City Corporation. The CMOM submittal shall fulfill the requirements of the Consent Administrative Order and the Corrective Action Plan dated May 28, 2010. The enclosed document is the 2013 CMOM. Please review the document and respond to City Corporation or myself with any concerns or comments.

If you have any questions, you may contact me at email cwbengineers@yahoo.com or phone (501) 413-0861.

Sincerely,

Clint W. Bell, P.E.
CWB Engineers, Inc.

Enclosure



Prepared By:



NPDES PERMIT No. AR0021768
CAO LIS No 09-146
AFIN 58-00105



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ACRONYMS

ADEQ- Arkansas Department of Environmental Quality
CAO- Consent Administrative Order
CAP – Corrective Action Plan
CEU- Continuing Education Units
CMOM – Capacity, Management, Operations and Maintenance
CSR- Customer Service Representatives
EPA – Environmental Protection Agency
FOG- Fats, Oils & Grease
GIS – Geographical Information System
GPS- Global Positioning System
I/I – Infiltration and Inflow
MGD – Million Gallons per Day
NOC- Network Operation Center
NPDES- National Pollutant Discharge Elimination System
O&M – Operations and Maintenance
ORP – Overflow Response Plan
PCW -Pollution Control Works (Treatment Plant)
PDH- Professional Development Hours
PM – Preventive Maintenance
PPE – Personal Protective Equipment
SCADA – Supervisory Control and Data Acquisition
SECAP – System Evaluation and Capacity Assurance Plan
SOP – Standard Operating Procedure
SSES- Sanitary Sewer Evaluation Study
SSO – Sanitary Sewer Overflow or Sanitary Sewer Outfall
SSORP- Sanitary Sewer Overflow Response Plan
TMDL- Total Maximum Daily Load
TSS – Total Suspended Solids
WWTP – Wastewater Treatment Plant

CHAPTER 1-PROGRAM INTRODUCTION

1.1 What is CMOM?

CMOM stands for "Capacity, Management, Operations, and Maintenance". It is a flexible, dynamic framework for municipalities to identify and incorporate widely accepted wastewater industry practices to:

- Better manage, operate, and maintain collection systems
- Identify and investigate capacity constrained areas of the collection system
- Respond to sanitary sewer overflow (SSO) events

In CMOM planning, the utility selects performance goal targets, and designs CMOM activities to meet the goals. Information collection and management practices are used to track how well each CMOM activity is meeting the performance goals, and whether overall system efficiency is improving.

1.2 Purpose and Overview

In an ideal world, sanitary sewer systems would be sized and maintained in a manner resulting in no unpermitted discharges and a high quality effluent released into the receiving stream. Unfortunately, sanitary sewer collection systems have limited hydraulic capacity to carry wastewater based on the size of the system and its components. The size of the components is based upon an analysis of the contributory flows into the system plus a factor for growth. The analysis considers residential, commercial and industrial sources of flow plus a designed leakage rate for the system components. With time, the design basis for the system may change resulting in flows in excess of the designed flow. Changes can include population increases beyond the anticipated growth factor, deterioration of the system components, inappropriate storm water connections, etc. These factors can eventually lead to overflows of the system as the increased flows exceed the ability of the collection system or lift stations to convey the wastewater.

Additionally, poor collection system maintenance can result in overflows irrespective of any flow increases. Materials such as grease, rags, roots and other foreign objects can create blockages within the system. Regular maintenance and cleaning can severely limit or even eliminate these occurrences, particularly grease and root development.

Overflows, regardless of the cause, release untreated sewage to surface waters, at times leading to substantial negative impacts on the receiving body. The majority of impaired waters in the United States are impaired due to nutrients, sediment, pathogens, metals and organic enrichment. Sewage overflows contribute to these impairments and can have acute impacts such as fish kills and beach closures. The CMOM provides the resources and information necessary to properly plan, manage, operate, and maintain the sanitary sewer system to minimize this environmental impact.

The CMOM shall enable the Permittee to:

- Properly manage, operate, and maintain, at all times, all parts of the collection system the Permittee owns or over which it retains operational control.

- Provide adequate capacity to convey base flows and peak flows for all parts of the collection system the Permittee owns or over which it retains operational control and take all feasible steps to stop and mitigate the impact of non-wet weather related sanitary sewer overflows in portions of the collection system owned by the Permittee or over which the Permittee retains operational control.
- Provide notification to parties with a reasonable potential for exposure to pollutants associated with an overflow event.

1.3 Goals

City Corporation operates and maintains approximately one hundred and ninety-eight (198) miles of sanitary sewer and nineteen (19) wastewater lift stations. Continuing growth, urbanization, changing hydrologic conditions, and age contribute to strain on this infrastructure. In addition, new regulations will impose additional issues and constraints. The purpose of this document is to detail a formal Capacity, Management, Operations and Maintenance (CMOM) Program. The Program's approach is environmentally conscientious and cost-effective. The Program elements outline and provide specific activities and reporting procedures to document the progress of the Program. Current and anticipated federal and state requirements will be evaluated and implemented throughout the program.

The Program's goals are:

- **Prevent-** Prevent sanitary sewer overflows. Take all steps feasible to eliminate current overflow locations and prevent new overflow locations.
- **Protect-** Protect the Environment. Take all feasible steps to eliminate and mitigate the impact of sanitary sewer overflows for all parts of the collection system and to develop and enforce appropriate ordinances that will enhance the performance of the collection system.
- **Prolong-** Prolong the life of City Corporation's sanitary sewer system, through effective rehabilitation methods and effective management of Inflow and Infiltration.
- **Provide-**
 - Provide effective resource management for the assets of City Corporation.
 - Provide adequate system capacity through the use of analytical and engineering methods through the development of a system to assess and prioritize maintenance, rehabilitation and replacement activities
 - Provide excellent service to our customers through effective communication, programs, and education.

1.4 Components

This CMOM contains chapters that address specific requirements of the CMOM Program. The chapters contain language addressing how City Corporation is applying CMOM principles to its conveyance and treatment facilities. The Program, including objectives, strategies, tactics and other activities will be subject to change and refinement as City Corporation continues implementing the CMOM Program. The CMOM will be updated annually for the first five years of the program.

1.5 Consent Administrative Order

City Corporation entered into Consent Administrative Order LIS No. 09-146 AFIN 58-00105 with the Arkansas Department of Environmental Quality (ADEQ). The CMOM document satisfies Section 8 of the Order and Agreement portion of the Consent Administrative Order (CAO). The CAO was executed November 6, 2009 and became effective December 25, 2009. The Executed CAO document is attached as Appendix A.

1.6 Corrective Action Plan

Corrective Action Plans were implemented as required by the CAO to guide City Corporation to implement improvements to the sanitary sewer collection system.

1.6.1 TSS & TRC

A Corrective Action Plan (CAP) was prepared by Garver LLC on behalf of City Corporation, Russellville, AR, to address the possible solutions for the City Corporation Pollution Control Works (PCW) Total Suspended Solids (TSS) and Total Residual Chlorine (TRC) violations. This CAP is required per the Consent Administrative Order (CAO) No. 09-146 AFIN 58-00105. The CAP outlines proposed improvements to address TSS and TRC violations and proposes an implementation schedule for the said improvements. This document can be viewed in Appendix B.

1.6.2 Comprehensive

A Comprehensive Corrective Action Plan (CAP) was formulated to address paragraph Two (2.) of the Order and Agreement section of the Consent Administrative Order LIS No. 09-146. The entire Comprehensive Corrective Action Plan can be viewed in Appendix B.

CHAPTER 2-PERSONNEL

2.1 City Corporation Organization

2.1.1 History

WWTP/Storm Water Basin-The original Wastewater Treatment Plant was constructed in 1923 on the banks of Prairie Creek near Arkansas Tech University. In 1964 a modern plant was built at the current site on Jimmy Lile Road and was upgraded in 1974,1978, and most recently in 1999. The recent improvements, including a new 21 million gallon equalization basin, have significantly increased the capacity of the plant. Extensive rehabilitation and replacement of the sewer collection system has also greatly reduced the number of overflows and volume at the plant.

The City of Russellville has been served by a community sanitary sewer system since approximately 1912. The sewers originally discharged to nearby creeks, but as the City grew the individual sewer lines were connected together to form a collection system. The sewers were maintained by the street department or other maintenance functions of the general City government until 1985, when City Corporation, the commission established by the City to operate the municipal water system, assumed responsibility for the sewer collection system, lift stations and treatment plant.

2.1.2 System Profile

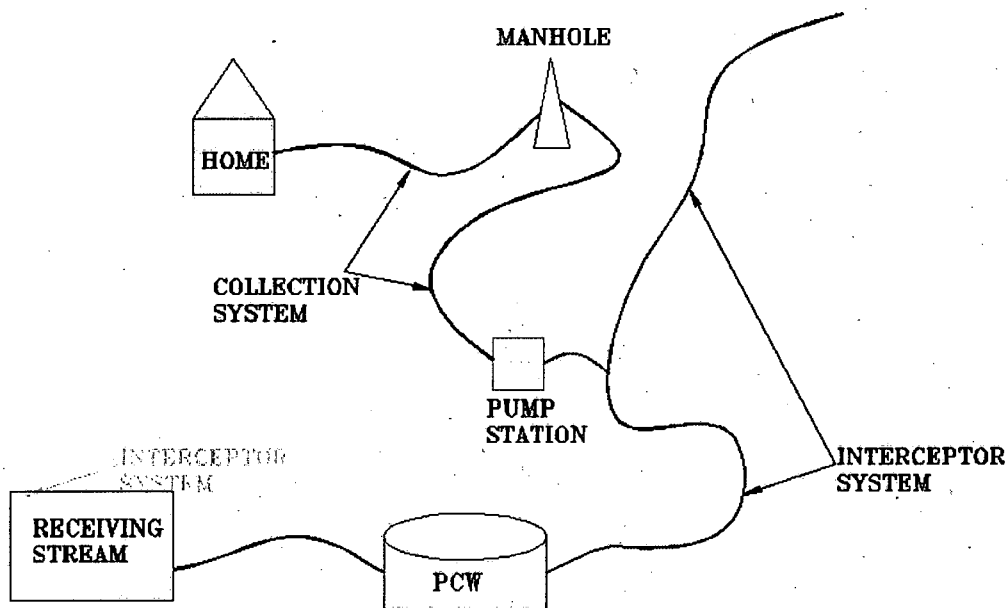
City Corporation's sanitary sewer system consists of gravity and force main components serving the community of Russellville and a satellite system of Dover. Maps of the system are maintained by the City Corporation at the Administration office located at 205 West 3rd Place in Russellville, AR. The system profile is as follows:

Table 2-1: Sewer System Profile

Total Population Served	25,011
Population of Russellville	27,586 (2010 Census)
Contributory Area	6,500 acres
Population of Dover	1,408 (2010 Census)
Total Customers	10,419 (Dec 2012)
Residential Customers	8,962
Other Customers	1,457
Treatment Plant Name(s)	City Corporation Pollution Control Works
Plant Design Capacity	7.3 MGD
Average Daily Flow 2012	5.28 MGD
Miles of Gravity Sewers	180.1
Miles of Force Mains	18.6
Number of Pump Stations	19
Number of Manholes	3652
Number of Employees	64

As shown in the graphic below, in City Corporation's service area, wastewater leaving a house or business typically flows through a gravity pipeline toward the street, where it enters the city's collection system and continues to a pump station. At this point, the wastewater is pumped into a large interceptor pipeline, which is then transported to the Wastewater Treatment Plant. After being treated, the effluent water is then released into Whig Creek, and ultimately flows into the Arkansas River.

Figure 2-1: System Profile



As a result of the terrain in Russellville, the system consists of 18 miles of force mains, and 19 lift stations to transport wastewater to the treatment plants. These pipes are operated under pressure and typically have minimal inflow and infiltration (I/I) problems.

Chart 2-1: Pipe Type Breakdown for Gravity Sewer

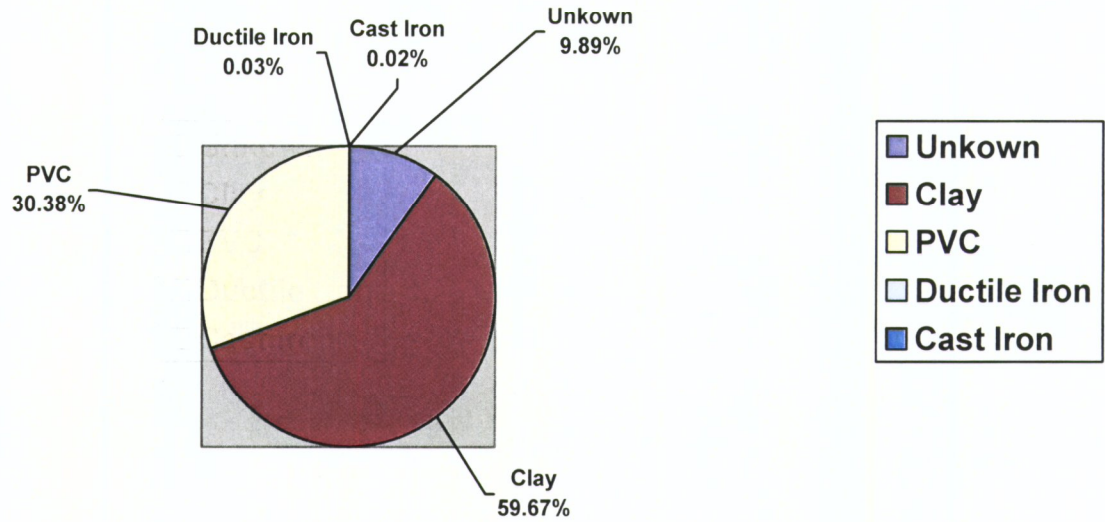


Chart 2-2: Pipe Type Breakdown for Force Mains

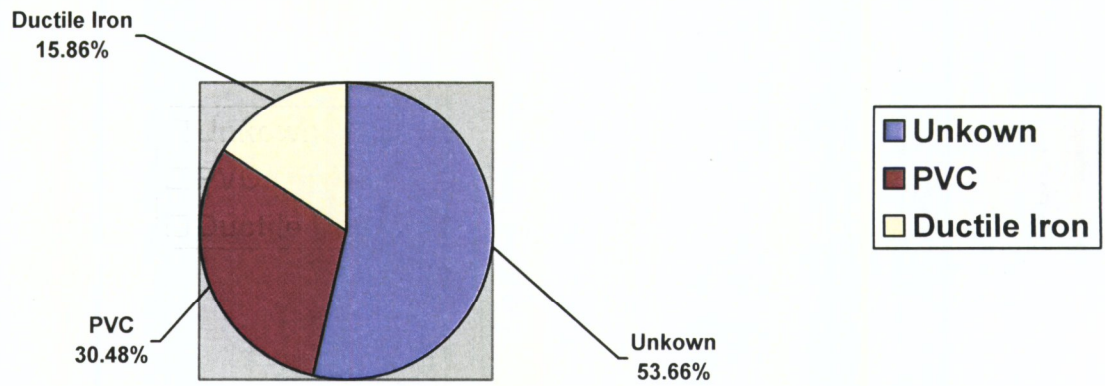


Chart 2-3: Pipe Diameter Breakdown for Gravity Sewer

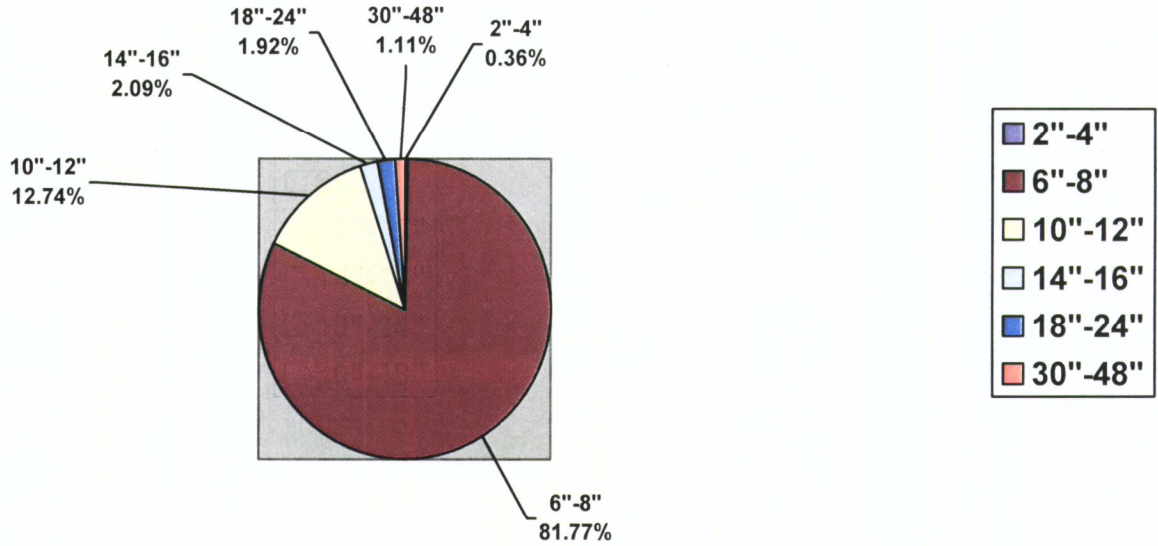


Chart 2-4: Pipe Diameter Breakdown for Force Mains

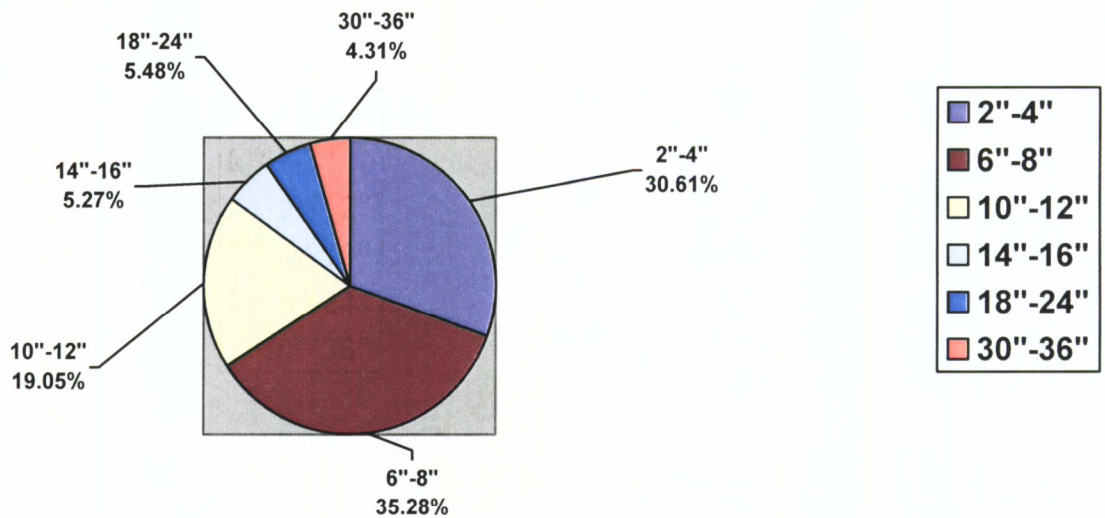
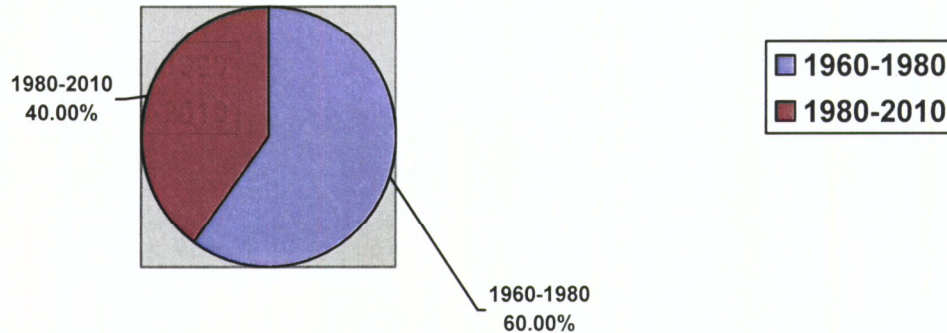


Chart 2-5: Pipe Age Summary



2.1.3 Organizational Structure

The sewer system is governed by City Corporation, a board established by the City of Russellville to operate the municipal water system both potable and sewerage. City Corporation assumed responsibility of the sewer system and treatment plant in 1985. The board is made up of five board members. City Corporation employs the service of a general manager, who oversees the entire utility and reports directly to the board. The following positions report to the General Manager: Operations Manager, Administrative Manager, and the NOC (Network Operations Center) Manager/Safety Coordinator. The Operations Manager is responsible for the treatment plant operations and maintenance, collection system operations and maintenance, construction, and laboratory operations. The Administrative Manager oversees the following areas: human resources, administration, accounting, and customer service. The NOC Manager/Safety Coordinator is in charge of safety, project coordination, dispatch, and mapping/GIS. Please refer to Appendix 14 for the Organization Chart for City Corporation.

2.2 Job Descriptions

Job descriptions lay out the foundation for the requirements and responsibilities of each person within the organizational structure. Descriptions are reviewed every two years and updated as necessary to reflect new or changing requirements. Employees are expected to comply with the elements of the job descriptions including any requirements for professional licenses and continuing education. Failure to meet the basic elements of an employee's assigned job description may be reason for termination, demotion or other disciplinary action deemed appropriate. City Corporation has 60 current positions available. The individuals who fill them perform a variety of duties essential to their mission. The Human Resources Division maintains current job descriptions for all positions. The job descriptions define the nature of the work to be performed, minimum requirements for the position, necessary qualifications or certifications, common examples of the type of work and licenses required. Job descriptions are included as Appendix C.

2.3 Public Relations

City Corporation has a customer service department responsible for correspondence and complaints received through email, calls, or letters. The CSR's (Customer Service Representatives) take all the calls from customers and make work orders that are sent to the Network Operations Center where they are routed to the field technicians to confirm and address. The lobby hours for the CSR's are Monday through Friday; 8:00 a.m. to 4:30 p.m. However, the CSR's can be reached by telephone Monday through Friday; 8:00 a.m. to 6:00 p.m. Employees trained in customer service provide prompt and courteous responses to telephone inquiries regarding billing issues or other concerns. Drive up services are provided until 6:00 p.m. at the main office for City Corporation. During evenings, weekends and holidays, an emergency after hour's number is listed on the answering machine that directs them to a representative located at the water treatment plant. A copy of the customer complaint form is located in Appendix 10. City Corporation is currently in the newspaper, this helps to inform the public and talk about the CAO's and other issues City Corporation faces. A copy of the ads are located in Appendix 12.

2.4 Training

Each licensed employee is required to obtain a minimum of 12 hours of professional/trades development training per year upon approval by an immediate supervisor. Training may be in the form of formal off-site or on-site training, on-the-job training, college/vocational course work or other approved education. The training must be directly relevant to the employee's duties as described in his/her job description. If an employee is required to obtain continuing education units (CEUs) or professional development hours (PDHs) for his/her license, the employee is required to determine if the license granting agency/board will accept the hours before the employee begins the course.

Within the first three months of employment, each employee is required to attend a course in Safety. The Manager or his/her designee will approve the course prior to attendance.

Other potential course topical areas include:

- Routine line maintenance including rodding, cabling, chemical and jet cleaning
- Traffic control
- Environmental/safety regulations
- Pump theory, operation, and maintenance
- Laboratory procedures, equipment calibration, sample collection and handling
- Electrical and instrumentation
- Public relations
- Sewer overflow response and reporting
- Collection system evaluation including smoke testing and closed circuit TV
- Pipe repair
- Collection system rehabilitation including pipe bursting, cured in place, slip lining, and trenching/shoring
- Heavy equipment operation
- Wastewater System Operations and Maintenance.

CHAPTER 3-LEGAL AUTHORITY

3.1 Ordinances

City Corporation is provided legal authority through the ordinances enacted by the City of Russellville, Arkansas. The ordinances providing authority are summarized below and are included in their entirety in Appendix D.

- Ordinance 1075- Sewer Use Ordinance - Outlines the requirements for sewer design, installation, testing, and inspection of new sewer facilities. It also details illegal connections and materials which are illegal to discharge into the sewer. It gives the employees of City Corporation the right to access all system properties.
- Agreement with the City of Dover - This agreement provides the specific details of the arrangement between the City of Dover and City Corporation in regards to sanitary sewer treatment. The City of Dover is a satellite system of City Corporation. City Corporation is responsible for treating the sanitary sewer, but the collection system is maintained by the City of Dover. This agreement gives City Corporation the specific right to review plans and specifications for system improvements, to inspect the Dover system, and to require maintenance or repair work as may be necessary to prevent the infiltration of surface water or storm drainage.
- Ordinance 2105 - Pretreatment Ordinance - Current Ordinance outlines the details of the City Corporation pretreatment program.
- Ordinance 976-Service Line Responsibility- Amended Ordinance that outlines the requirements for sewer service line installation and responsibility for repairs.
- Ordinance 2060-Service Line Responsibility- Current Ordinance that outlines the requirements for sewer service line installation and responsibility for repairs.
- Ordinance 2043-Current Sewer User Rate Ordinance -This Ordinance establishes the current sewer rates for City Corporation.
- Ordinance 2044-Current Water User Rate Ordinance- This Ordinance establishes the current water rates for City Corporation.
- Ordinance 949-Original Sewer User Rate Ordinance
- Ordinance 1022-Amended Sewer User Rate Ordinance
- Ordinance 1294-Amended Sewer User Rate Ordinance
- Ordinance 1372-Amended Sewer User Rate Ordinance
- Ordinance 1388 - Amended Pretreatment Ordinance

3.2 ADEQ Permits

3.2.1 NPDES Permit

City Corporation is authorized to discharge through NPDES permit No. AR0021768. Discharge shall be in accordance with effluent limitations, monitoring requirements, and other conditions set forth in this permit. The current was issued September 30, 2010 and became effective October 1, 2010. The expiration of the existing permit is September 30, 2015. The entire permit can be viewed in Appendix 8.

3.2.2 No Exposure Storm Water Permit

No exposure means all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snow melt and/or runoff. No Exposure Exclusions may be obtained for discharges composed entirely of storm water associated with industrial activity in lieu of this general permit as long as all of the required conditions for applicability can be certified. A Notice of Intent form can be obtained from the General Permits Section of the Water Division. The No Exposure Exclusion Certification must be renewed 120 days after the effective date of the renewal permit. A renewal form is located in Appendix F.

CHAPTER 4-MANAGEMENT

4.1 Maintenance Facilities and Equipment

City Corporation maintains several facilities to support the collection system program. Administrative activities are conducted at the Administrative Office, which houses the Maintenance Operations, Human Resources, Administration, Customer Service, and Network Operations. The Pollution Control Works Facility houses all Pollution Control workers, Pretreatment Operations, and Laboratory Operations. The majority of facility and construction equipment is stored at the construction office or on site at the treatment plant facility. Adjacent to the Pollution Control Work-Treatment Plant is a Construction Office, which houses all Construction crews.

The Construction & Maintenance Operations uses a wide and extensive variety of equipment including backhoes, tractors, dump trucks, utility crew trucks with trailers, pickup trucks, utility vehicles, hydraulic jet cleaners, trailers, hydraulic pumps, video inspection trailers, portable video equipment, gas detectors, and safety equipment. A complete list of all Maintenance Vehicles and Major Equipment is located in Appendix G.

4.1.1 Scheduling

To schedule and maintain facilities and equipment City Corporation prints "Maintenance Tickets". Maintenance can be scheduled: every day, once a week, twice a month, once a month, quarterly, six months, and yearly. They are kept on file and can be reviewed upon request.

4.1.2 SCADA

The Maintenance Operations of City Corporation maintains 19 wastewater lift stations throughout the city. There are four employees assigned to monitor and repair lift stations. These lift stations are constantly monitored by the Supervisory Control and Data Acquisition (SCADA) system.

SCADA is a computer system for gathering and analyzing real time data. SCADA systems are used to monitor and control a plant or equipment in industries such as telecommunications, water and waste control, energy, oil and gas refining and transportation. A SCADA system gathers information, such as where a leak on a pipeline has occurred, transfers the information back to a central site, alerting the home station that the leak has occurred, carrying out necessary analysis and control, such as determining if the leak is critical, and displaying the information in a logical and organized fashion. SCADA systems can be relatively simple, such as one that monitors environmental conditions of a small office building, or incredibly complex, such as a system that monitors all the activity in a nuclear power plant or the activity of a municipal water system. All SCADA information is stored in Historian (a historical database) on the City Corporation's computers.

4.1.3 Replacement Parts

City Corporation maintains a construction shop with a supply yard that houses all necessary materials and equipment required to make emergency repairs. Appendix H is an inventory of all maintained spare parts. The program "AS/400" is used to keep inventory of all these spare parts. For those parts not kept in inventory, City Corp uses vendors such as River Valley Winwater, MS Wholesale, and others.

4.2 Network Operations

4.2.1 Collection System Maps-GIS

Geographic Information System (GIS) technology has made the mapping and map updating process considerably more efficient. GIS is a computerized mapping program capable of combining mapping with detailed information about the physical structures within the collection system. City Corporation maintains a CAD-based map of the entire sewer system. The map is updated as additional information is received. To facilitate information storage and retrieval, the sewer system has been segmented into 27 individual basins. These basin labels were developed around 1965, and the underlying manhole numbering system was developed in 1986. A map of the basins is shown in Appendix 15.

City Corporation has successfully converted from a manually drawn, paper mapping system, to a Geographic Information System (GIS) based on aerial photography. All graphic information from the old system has been entered into the computerized mapping system, and the assignment of identifying labels to all manholes is complete.

Recognizing that significant error will likely be associated with the transfer of available graphic data (e.g. hand-drawn maps) into the GIS, City Corporation has also undertaken a program to obtain accurate positions for manholes within the system through the use of Global Positioning System (GPS) technology.

4.2.2 Construction

City Corporation's Construction Operation has two-4 person crews that complete new services, maintenance, and repairs on the water and sewer system. Also a 3 person crew performs Inflow & Infiltration work and repairs in the sewer system. The Inflow & Infiltration crew gets assistance from the other crews to keep up with the repairs to the sewer system. The Inflow & Infiltration crew is responsible for sewer stoppages during regular hours. City Corporation maintains 2 persons on call after hours for sewer stoppages and water leaks.

4.2.3 Developer Funded

City Corporation is involved with several Developer Funded Projects. The designs are reviewed by City Corporation staff for approval. Once approved, the construction site is supervised by qualified personnel to ascertain that the construction is in accordance with the plans and specifications. All new lines are vacuum tested to 5 psi for 10 minutes with no loss of pressure and all new manholes are vacuum tested at 10 psi for 1 minute with no loss of pressure.

4.3 Safety Program

The Safety Division is administered by the Safety Coordinator. The Safety Division is responsible for:

- Safety training
- Safety inspections
- Accident investigations
- Development of emergency response procedures
- Documentation of training, sampling, inspections, and medical information conducted by the Safety Division
- Safety Notices
- Communication of relevant safety information to all employees

4.3.1 Safety Committee

City Corporation has a Safety Committee of five that met monthly during 2009. The agenda and minutes are kept. The committee typically reviews accident reports and makes policy improvement recommendations. City Corporation's Workplace Safety Committee document can be viewed in Appendix I.

4.3.2 Safety Procedures

Safety rules are written rules describing required practices and procedures to follow for performing routine and non-routine activities in a safe manner. City Corporation personnel are responsible for familiarizing themselves with all safety rules and are mandated to follow all safety rules in the performance of their daily activities while at City Corporation's facilities or when representing City Corporation off site. Supervisors are responsible for: informing, explaining, and publicizing all safety rules to their personnel; enforcing observance of all safety rules by personnel; and ensuring each employee receives a copy of the safety rules. To view the Safety & Health Manual in full see Appendix J.

4.3.3 Vehicle Safety

City Corporation maintains an accurate log of all reportable accidents, both in the HR department for workers comp, and in the Safety Manual binder completed by the safety coordinator. All injuries have an accident investigation sheet completed and filed with the accident report. A chart of injuries with name, department, date, and type of injury listed is on file with the safety coordinator. The following are related to the safety program:

- Appendix K- Vehicle Accident SOP (Standard Operating Procedures)
- Appendix L- Parked Traffic Cone Procedure
- Appendix M- Cone Positioning

4.3.4 Pharmaceutical Take-Back Program

City Corp assisted in the development of a new Pharmaceutical Take-Back Program. City Corp purchased the Drug Terminator incinerator and donated to the River Valley Operation Medicine Cabinet. It is our understanding that it is the second full-time program in the state. The Drug Terminator poster can be viewed in Appendix N. The Proper Drug Prescription Disposal Guidelines can be viewed in Appendix O.

4.4 Emergency Disaster Response Plan

Disasters/Emergencies that are likely to occur in the service area that are addressed are: earthquake, major fire emergencies, water outages due to loss of power, localized flooding, water contaminations and acts of sabotage. The Emergency Disaster Response Plan is located in Appendix Q.

4.5 City Corporation Master Plan 2003

There were several locations in the last master plan (2003) effort that reflected similar results and inadequate deficient areas as the 1997 Wastewater Collection System Master Plan. Flow data may have limited the accuracy of these collection system models. The master Plan recommended that City Corporation perform and I/I evaluation of its collection system and start a Clay Pipe replacement program. Improvements to Prairie Creek Pump Station, Pump Stations "A", "B" and 23rd St Pump Station were also included in the report. Because of the age and limitations of the existing 2003 Master Plan, City Corporation should consider a new comprehensive Master Plan for the sewer system. City Corporation is currently involved in a system wide flow study and extensive Sanitary Sewer Evaluation Studies throughout the system, therefore, it is an opportune time to complete the Master Plan.

CHAPTER 5-OPERATIONS AND MAINTENANCE

Collection system operation and maintenance (O&M) consists of inspection, evaluation, preventative maintenance, and cleaning to maintain flow and mitigate inflow and infiltration. O&M varies by the equipment type, condition, age, and operating history. Chapter 4.1 describes City Corporation's maintenance equipment. Table 5-1 is a baseline O&M schedule. However, periodic factors may necessitate a more frequent O&M schedule for individual components. Appropriate corrective actions or temporary mitigation measures are initiated based upon the findings of the routine O&M activities.

Table 5-1: Collection System Routine Maintenance Schedule

Description	Known Problems/Issues	Every Other Week	Monthly	Semi-Annually	Annually	Every 5 years
Restaurant/Apartment Areas	Routine FOG issues	Monitor Line	Clean			Assess condition
Lines near Streams or Creeks	No known problems, but could be a larger source of I/I			Walk lines and visually inspect manholes for evidence of surcharging	Clean and Televisive lines	Assess condition
Lines in remote areas	No known problems but could present large I/I sources if undetected			Walk lines and visually inspect manholes for evidence of surcharging	Clean and Televisive lines	Assess condition
All other lines in system	No known problems					Clean and Televisive lines, assess condition

5.1 Critical Components



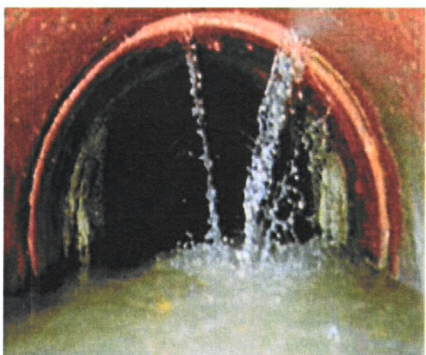
Grease-Grease and grease like products can be significant causes of sewer overflows. Restaurants and industrial facilities can discharge grease as part of their normal sanitary flows that can lead, in time, to blockages, backups, and overflows. The discharge of fats, oils, and grease (FOG) are regulated through the City Corporation FOG program, however, backups can sometimes occur. Typically, areas in which there is heavy industrial activity or large numbers of restaurants will be regularly monitored for accumulations of fats, oils, and grease (FOG).



Stream Crossings-Gravity sewers follow the natural topography of the land which often leads to stream bottoms. Several miles of City Corporation's collection system were constructed along streams making them critical components requiring greater monitoring. Also, several areas within the system are isolated from population centers and as such an overflow could go undetected for an extended period of time. These areas will be monitored by the Inflow & Infiltration crew to prevent an undetected overflow.



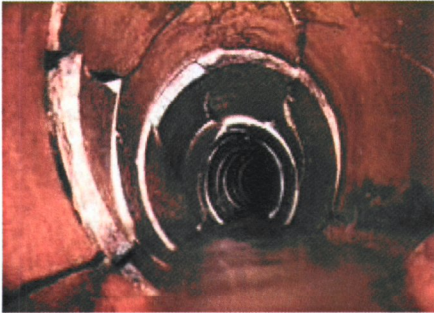
Deteriorating Sewer System- A significant amount of Russellville City Corporations sanitary sewer pipes are beyond their designed life. Deteriorating pipes are a major component in the operation and maintenance of the system. Planning and funding for long-term sewer rehabilitation and replacement projects will help address this critical component.



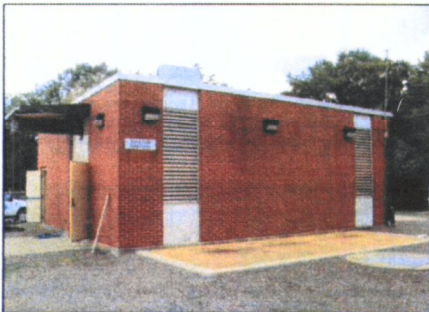
Infiltration and Inflow (I/I)- Rainfall and occasional snowmelt can infiltrate through the ground into leaky sanitary sewers. Roof drains connected to sewers, broken pipes, or poorly connected sewer service lines are also large contributors of I/I. Smoke Testing and Dye Testing will help to identify these areas of concern.



Undersized System-Undersized Force Mains or Outfall lines can cause a major problem in a Sanitary Sewer System. Through the use of Hydraulic Modeling and engineering tools the system shall be designed to handle the system flows without an overflow.



Pipe Failures-Pipe failures can result from cracked pipes, broken pipes, or blocked pipes. Identifying these failures before they occur through smoking or televising will help to prevent overflows and stoppages.



Prairie Creek Lift Station

Pump Station Failures-Pump failures, power failures or inadequate wet well capacity can cause an overflow. Power backup generators and scheduled O&M on the Pump Stations will help to prevent these overflows.

5.2 Collection System

The Russellville wastewater collections system consists of approximately 180 miles of publicly maintained gravity sewer ranging in size from 6" to 36" in diameter, approximately 3597 manholes, 19 lift stations of various pumping capacities and 18.6 miles of force main ranging in size from 2" through 48" in diameter.

5.3 Infiltration/Inflow Control

City Corporation has a more detailed and systematic program to address the infiltration/inflow issue through the completion of a city wide wastewater flow-monitoring program. This effort resulted in an estimate of sanitary flow, infiltration, and inflow for each of the 27 basins within the City. This study also identified the basins in which I/I reduction was deemed to be most cost-effective. This work serves as the basis for direction of the City Corporations infiltration and inflow reduction efforts.

An Inflow & Infiltration (I &I) crew was re-established at City Corporation in 2010. Currently staffed by 3 employees, their goal is to identify and mitigate sources of infiltration and inflow into the system. City Corporation has adjusted its approach to infiltration/inflow reduction by the following:

- Re-Establishing an I/I Program
- Developing a qualified crew
- Equipping the Crew
- Supporting the I/I team

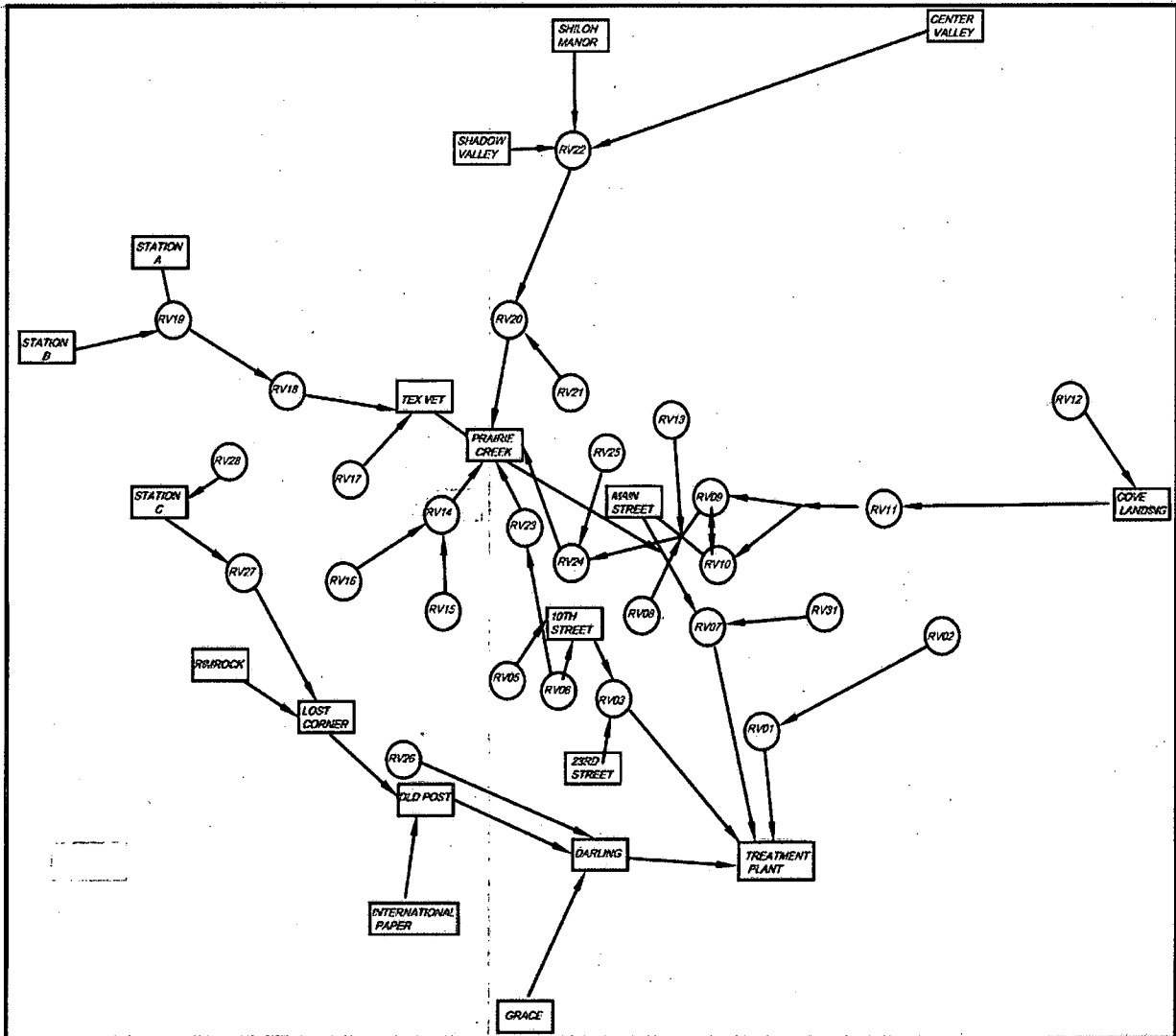
It is anticipated that an expansion of I/I reduction efforts, as outlined above, will be effective in reducing peak flow rates.

5.4 Lift Stations

5.4.1 Operation & Monitoring

The collection system includes 19 lift stations to move sewage from low elevation areas to higher elevation areas. Two (2) of the pump stations have auxiliary power with the remaining seventeen (17) capable of accepting a portable generator. All 19 lift stations have Genset quick connections installed. Fifteen of the nineteen stations have full Supervisory Control and Data Acquisition (SCADA) systems in place. SCADA system generates and stores critical operational information, such as pump run times, wet well status, power status, and other operational data. Utilizing advanced radio technology with extensive functionality, the system provides remote operational control of the facilities, a benefit during emergency or other abnormal conditions. The remaining four stations have notification by phone line. Periodic loss of power may occur due to storms and electrical grid equipment failures. The lift stations have limited storage capacity and as such are subject to overflows during a power loss. Therefore the following lift stations are considered critical components due to a lack of auxiliary power and require more frequent monitoring: 23rd St., Tyson, Center Valley, Shiloh Manor, International Paper, and Shadow Valley. Please refer to Table 5-2 for the Pump Station Routine Maintenance Schedule. A basin flow diagram indicating direction of flow from one basin to another including pump stations is shown on Figure 5-1.

Figure 5-1: Basin Flow Diagram



5.4.2 Preventive & Routine Maintenance

Responsibility for lift station maintenance is divided among four employees. The removal of grease from each pump station is done at least twice a year. All equipment is to be maintained in accordance with the manufacturer's specifications. In addition, the following maintenance activities will be conducted:

Table 5-2: Pump Station Routine Maintenance Schedule

Description	Alarming /Known Issues	Daily	Weekly	Monthly	Annually	Every 5 years
Main St. Prairie Creek	Backup power available, full SCADA, no known issues – Large Flow Stations	Monitor SCADA Information	Check station for problems including security, Record pump pressure and pump run times	Check and record motor amperage, check mechanical and electrical, operate backup generator, check and top off all fluids	Exercise all valves	Disassemble and clean internal pump components, check impeller, disassemble and clean check valves, assess condition
Cove Landing International Paper Darling Tex Vet Old Post	No known problems, has back up power and SCADA or other notification system	Monitor SCADA information	Check station for problems including security, record pump pressure and run time	Check and record motor amperage, check mechanical and electrical connections, - operate backup generator, check and top off all fluids	Exercise all valves	Disassemble and clean internal pump components, check impeller, disassemble and clean check valves, assess condition
Center Valley Rimrock 23 rd St. Shadow Valley Tyson Grace Shiloh Manor Lost Corner Station A Station B Station C 10 th St.	SCADA or other notification system, no standby power but have the capability of backup power by a portable generator	Monitor SCADA information	Check station for problems including security, record pump pressure and run time	Check and record motor amperage, check mechanical and electrical connections	Exercise all valves	Disassemble and clean internal pump components, check impeller, disassemble and clean check valves, assess condition

5.4.3 Lift station details

Table 5-3 lists the lift station name, pump manufacturer, pump model, number of pumps, pump horsepower, force main diameter, and wet well dimensions.

Table 5-3: Lift Station Details

Name	Pump Manufacturer	Pump Model	# Pumps	Horsepower per Pump	Force Main Diameter	Wet Well Dimensions Diameter (ft)	Wet Well Dimensions Depth (ft)
10 th Street	Hydromatic	S6A300M4-4	2	30	10	13	22.5
23 rd Street	Allis-Chalmers	400 F7-M1	2	10	6	6	19.2
Lift Station A	Hydromatic	UNK	2	25	8	6	21
Lift Station B	Hydromatic	S4Q3000M4-4	2	30	8	6	21
Lift Station C	Hydromatic	S4T1000M4-4	2	100	6	6	16
Center Valley	Goulds	1GA87J4BD	2	5	4	4	10.6
Cove Landing	Hydromatic	S4B200M4-4	2	20	8	6	21.5
Darling	Hydromatic	S6A4000M4-4	2	40	12	12	24
Grace	Pumpex	UNK	2	30	8	8	17.25
International Paper	Myers	4VC 150M4-43	2	15	6	6	11.1
Lost Corner	Myers	6VC 150M6-23	2	15	12	6	10
Main Street	Allis-Chalmers	1-69945	3	1-25HP / 2-50HP	30	11X9.4	22
Old Post	Myers	6VC 150M6-23	2	15	12	6	17.5
Prairie Creek	Flyght	3306.735	3	245	24	30X11	29.4
Rim Rock	Myers	4WHV50M4-21	2	5	6	5	11
Shadow Valley	Hydromatic	S4M750M3-4	2	7.5	4	6	15.1
Shiloh Manor	Myers	4VHA	2	10	4	6	12
Tex-Vet	Hydromatic	S8L1500M4-6	2	50	15	12	23.2
Tyson	Hydromatic	S4P1500M3/4-4	2	15	6	6	15.8

Table 5-4: Lift Station Pumping Capacity

Name	Total Dynamic Head	Pump 1 Flow Rate (gpm)	Pump 2 Flow Rate (gpm)	Pump 3 Flow Rate (gpm)	Pump 1 & 2 Flow Rate (gpm)	Pump 2 & 3 Flow Rate (gpm)
10 th Street	86	1,103	1,158	n/a	1,262	n/a
23 rd Street	47	113	138	n/a	343	n/a
Lift Station A	102	261	310	n/a	395	n/a
Lift Station B	125	390	360	n/a	Low flow	n/a
Lift Station C	197	153	Not operating during visit	n/a	Not operating during visit	n/a
Center Valley	93	46	35	n/a	49	n/a
Cove Landing	105	202	219	n/a	234	n/a
Darling	76	835	763	n/a	1,108	n/a
Grace	134	211	242	n/a	267	n/a
International Paper	96.4	462	392	n/a	Not configured for dual pump	n/a
Lost Corner	75	696	564	n/a	942	n/a
Main Street	36	Not operating during visit	808	924	n/a	1,872
Old Post	45.2	852	948	n/a	1,140	n/a
Prairie Creek	98	2,123	2,293	Not operating during visit	3,976	n/a
Rim Rock	45	116	151	n/a	Not configured for dual pump	n/a
Shadow Valley	40	102	91	n/a	81	n/a
Shiloh Manor	96	127	124	n/a	137	n/a
Tex-Vet	50	1,520	1,595	n/a	2,256	n/a
Tyson	82	228	191	n/a	249	n/a

5.5 Force Mains

5.5.1 Air Release Valves

City Corporation maintenance crews operate air release valves every six months or more often as needed to release air that may accumulate in the system. Any accumulation is removed during the operation of the air release valves.

5.6 System Rehab

5.6.1 Mainline & Manhole Repairs

Routine maintenance will identify repair needs within system components. The appropriate repair for any given problem is dependent upon the nature of the problem and cannot be prescribed in this plan. However a priority hierarchy has been established to structure when and how repairs are to be accomplished. The hierarchy is based upon identifying and repairing critical components first. Critical components are parts of the collection system which if failure occurs will result in system failure and sewer overflow. Such items may include failure of a pump, failure of a backup generator to start, or obstruction in the sewer line. Other problems identified by maintenance activities will be less acute and can be repaired on a lower priority basis. This may include loose or missing manhole bricks, broken manhole covers, lift station lighting, etc. When normal maintenance activities identify the need for component repairs or when problems are brought to the attention of the system by customers or others, the problem and corresponding repair will be assigned a priority ranking based on the following hierarchy. The response time and repair time goals are stated in the hierarchy. The goals shall be monitored and evaluated annually with the plan review.

5.6.2 Scheduling

Table 5-5: Collection System Response and Repair Priority Hierarchy

Problem	Priority	Response Time	Action	Repair Time Goal
Active Sewer Overflow	1	Within 1 hour of receiving report	Stop overflow, return system to normal operation	Within 4 hours of arriving on site
Failure of Critical Component, Overflow/Bypass Will Occur if Not Repaired	1	Within 1 hour of receiving report or discovering problem	Repair or replace component, return system to normal operation	Within 4 hours of arriving on site
Unsafe Condition Poses Risk to Public or Employees	1	Within 1 hour of receiving report or discovering problem	Mitigate and repair to eliminate unsafe condition	Mitigate risk within 2 hours of arriving on site, repair within 8 hours if public risk, 7 days if employee risk

Problem	Priority	Response Time	Action	Repair Time Goal
Evidence of System Surcharging and Intermittent Overflow	2	Within 1 day of receiving report or discovering problem	Clean sewer line and/or check for proper downstream pump station operation and repair as needed. Re-evaluate problem following cleaning/repair.	Within 8 hours of arriving on site for cleaning and station repairs. Initiate I&I evaluation within 30 days
Failure of Backup Power System	2	Within 3 days of receiving report or discovering problem	Repair or replace equipment as needed	Within 10 days of response
Evidence of Surcharging, No Overflow Evidence	3	Within 1 week of receiving report or discovering problem	Clean sewer line and/or check for proper downstream pump station operation and repair as needed. Re-evaluate problem following cleaning/repair.	Within 8 hours of arriving on site for cleaning and station repairs. I&I evaluation within 90 days
Failure of Monitoring or Measuring Equipment	3	Within 3 days of receiving report or discovering problem	Make repairs or replace as needed	Repairs within 7 days of response. Replacement within 30 days.
Evidence of I&I Non-surcharging	4	Complete evaluation of cause within 90 days of discovering problem.	Make corrective actions based on I&I evaluation findings	Within 360 days
Component failures non-critical and general non-routine maintenance	5	Evaluate repair/maintenance need within 180 days of discovering problem	Make repairs	Within 360 days

Chart 5-1: Mainlines Rehabbed

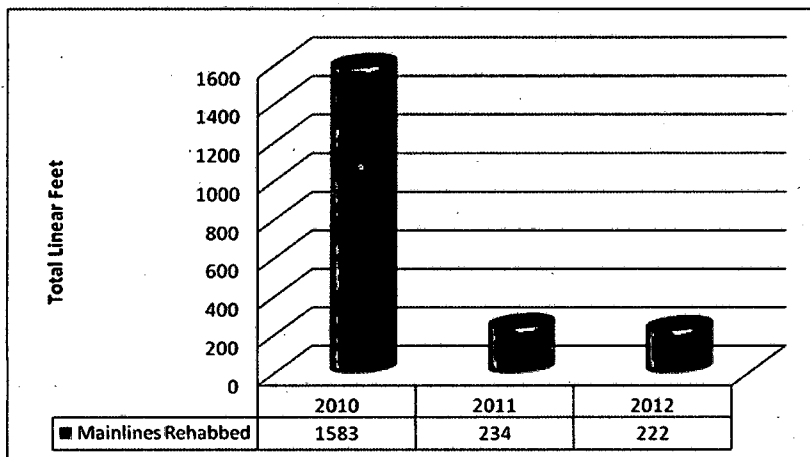
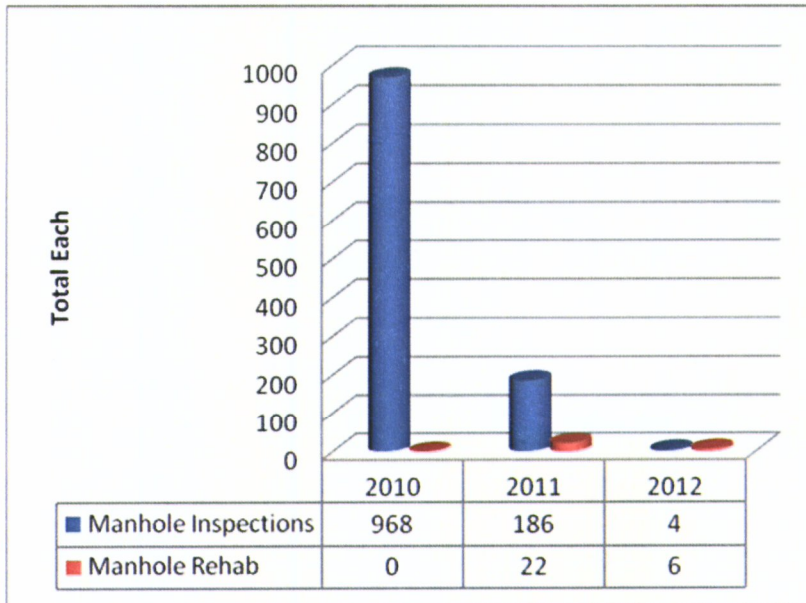


Chart 5-2: Manholes Rehabbed/Inspected



5.6.3 Service Lateral Repairs

City Corporation owns, maintains, and repairs all of the underground water and sewer lines up to the customers' property line. The customer owns and is responsible for the installation; maintenance, and repair of everything from the property line in the case of sewer service into the house. If a stoppage occurs on the customer's portion of the line, the customer must have the leak repaired. Service Line Ordinance 2060 addresses the ownership of the service lateral, and can be found in Appendix D.

An inspection is done on all service lines new or repaired. The inspector will inspect the sewer service connection between the house and the property line, and it must be installed according to Arkansas State Plumbing Code standards. The Arkansas State Plumbing Code standards states that the pipe used must be Schedule 40 piping and at least 4" in diameter with a fall of 1% or 1/2" every 10'. There also has to be a 2-way clean out installed within 3' of the building and the line has to be tested for leaks with water or air to pass inspection.

5.7 Cleaning/Television Inspection

Pipeline hydraulic cleaning and television inspection are performed as a part of routine maintenance in areas where deposition issues are chronic or in response to immediate flow problems. The hydraulic cleaning is effective in reducing material that becomes deposited in lines with minimal slopes and in areas of high commercial activity. Television inspection is an aide in identifying lines with obstructions, with corrosion problems, and with potential failure possibilities. Both cleaning and television inspection are performed by crews from the Construction Department.

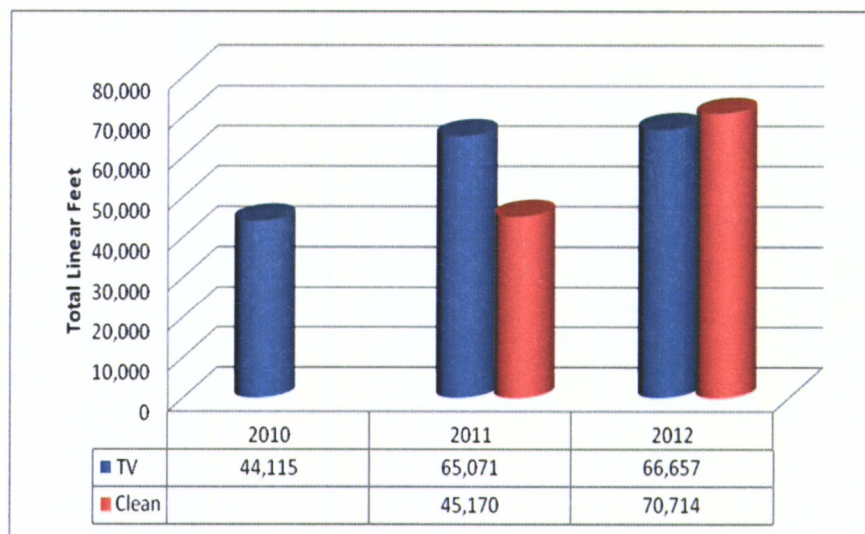
City Corporation will clean the sanitary sewer per the baseline maintenance schedule with the equipment listed below.

- (2) Jetters
- (1) Jetter/Camera Trailer
- (1) Tiger Vac
- (1) Easement Machine

Additional cleaning equipment and manpower are available via contract operations with several area vendors. City Corporation does not anticipate using contract services unless the following conditions exist:

- system equipment inoperable for extended period
- manpower shortage
- unusually high cleaning demand due to unforeseen circumstances
- large flows or difficult conditions requiring specialized expertise or equipment

Chart 5-3: Cleaning/Television Completed



5.8 Root Control

The intrusion of roots into sewer lines, particularly collector sewers, is always going to be an ongoing concern for City Corporation. Extensive root intrusion, if allowed to continue without attention, can result in reduced system capacity and, ultimately, blockage of the pipe. Problems associated with root intrusion are sometimes exacerbated by the presence of grease in the flow stream, which tends to attach to any roots present and cause more rapid impact on flow conditions.

Historically, these issues have been addressed through pipeline cleaning efforts by the Inflow & Infiltration crew, which generally consisted of mechanical removal of roots. Starting in 2013, City Corporation will obtain the service of Duke's Root Control, Inc. to apply a root control product to the collection system. Duke's will

apply a product called "Razerooter II", which contains the active ingredient diquat dibromide ("diquat"). "Razerooter II" is the only diquat-based, sewer root control product that is registered with the US Environmental Protection Agency (EPA Registration No 64898-8) and the Arkansas State Plant Board. City Corp will treat approximately 25,000-30,000 linear feet of the collection system. Duke's will be directed to known areas of the collection system where roots are problematic. The footages and areas of application will be tracked and reported by City Corp.

5.9 Grease Control

Ordinance 1075 was created in 1983. Sec. 6 of the ordinance addresses grease. It states "Grease, oil, and sand interceptors shall be provided when, in the opinion of the Superintendent, they are necessary for the proper handling of liquid wastes containing grease in excessive amounts, or any flammable wastes, sand, or other harmful ingredients; except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the Superintendent, and shall be located as to be readily and easily accessible for cleaning and inspection." The entire ordinance is located in Appendix D.

City Corporation currently has 154 grease traps. Each food establishment that has a grease trap is put on an inspection schedule for cleanings. The schedule is located in Appendix R. City Corporation is in the process of amending the current grease ordinance to improve the FOG program. A current grease trap detail drawing is located in Appendix U.

5.10 Treatment Facility

Pollution Control Works used to be located on the NW part of Russellville, around the Arkansas Tech area. However, around 1963, the Corp of Engineers developed the McClellan Kerr Navigation System which involved the building of a dike to keep Lake Dardanelle from flooding Russellville. This caused the water and wastewater utility to relocate their facilities to the southeast side of town. The Pollution Control Works (PCW) design capacity is 7.3 MGD with an additional 21 MG equalization basin for wet weather flows. The breakdown of the daily flows for the year 2012 are located in Appendix 11. Appendix 16 shows the layout of the treatment plant:



POLLUTION CONTROL WORKS

404 Jimmy Lile Rd.
Russellville, AR 72802

Receiving Stream: Whig Creek then into Arkansas River

Operation Startup: 1964

Capacity (Design Flow): 7.3 MGD

Average Daily Flow (2012): 5.28 MGD

Level of Treatment: three biological treatment processes

Solids Management: Aerobic Digester with Land Application

Disinfection Method: Chlorine Contact Chamber

Effluent Discharge Limitations: (reported monthly to the Arkansas Department of Environmental Quality):

Effluent Characteristics	Discharge Limitations Concentration Monthly Average	Discharge Limitations Concentration Daily Maximum
BOD	10 mg/L	15 mg/L
TSS	15 mg/L	22.5 mg/L
pH	6.0 S.U. Min to 9.0 S.U. Max	
Fecal Coliform	1000/100 mL	
Dechlorination	<0.1 mg/L	

Interim Limits: (established by CAO):

Effluent Characteristics	Discharge Limitations Mass (lbs/day) Monthly Average	Discharge Limitations Concentration (mg/L) Monthly Average	Discharge Limitations Concentration (mg/L) 7-day Average
Nitrates (NO ₃ -N)	919.3	15.1	20.4
Total Residual Chlorine (TRC)	N/A	0.55 (Inst. Max)	

5.11 Private Defects

In 2008, City Corporation started the "I&I Cleanout Cap Program". The goal of the program was to work through each pump station basin by smoke testing to identify broken or missing cleanout caps, and private service line defects throughout the entire collection system. The two-man I&I crew carried a supply of cleanout caps and replaced missing caps as they were discovered. A record was kept so that they could confirm each cap that was installed. The first cap for a particular residence would be installed for free; any subsequent caps installed during follow-up investigative smoke testing leads to a \$50 direct bill to the customer. The routine of the smoke testing operation was to first send out door hangers that gave the customers notification of the upcoming smoke testing to be performed. In 2010, City Corporation changed from door hanger notifications to newspaper ad notifications in hopes to add more production days for smoke testing and finding defects. The defects were marked in green paint, and added to a log for future repairs. The private defect list can be found in Appendix S.

Chart 5-4: Private Defects Rehabbed

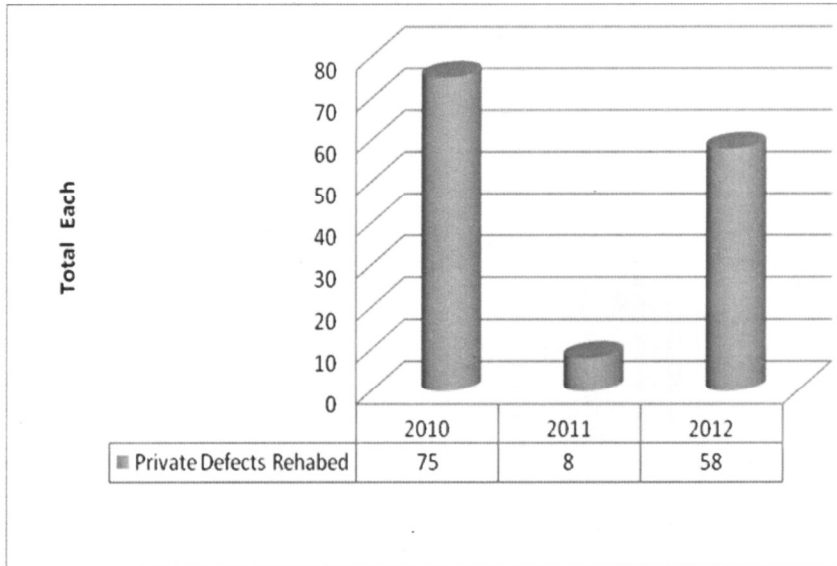
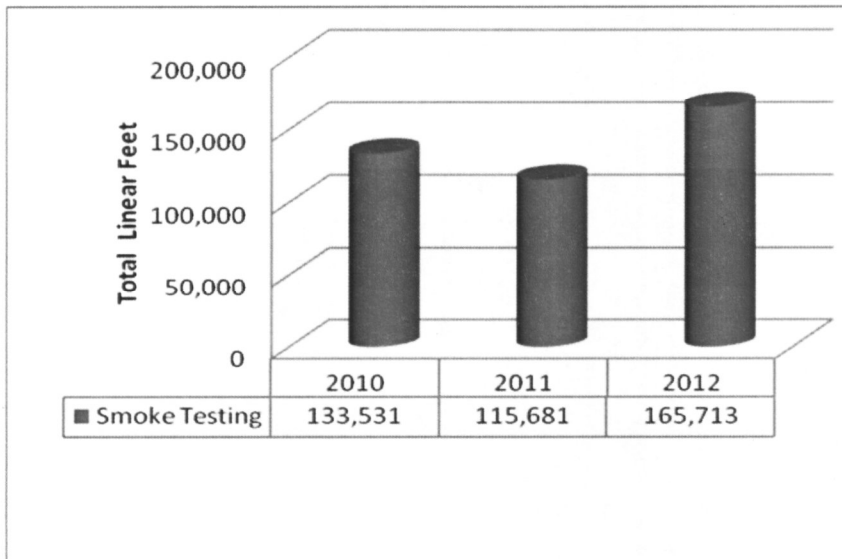


Chart 5-5: Smoke Testing Completed



5.12 Water Quality Monitoring

The Arkansas Department of Environmental Quality (ADEQ) has issued a report on the condition of the state's waters. The 2010 list of Impaired Water bodies is the assessment used to determine the water quality standards throughout the state. City Corporation discharges into Whig Creek. Whig Creek is listed as an

impaired water bodies (stream) with completed TMDLs. The ultimate receiving stream is the Arkansas River and it is listed as a water quality limited water bodies (streams).

The 2004 Integrated Water Quality Report by ADEQ states that "Region Whig Creek continues to be impaired by point source discharges. Both municipal and industrial discharges exist in Whig Creek. A TMDL has been completed for this water body." The following table shows the report and the location of the sampling site.

ARK0067 Whig Creek Downstream of Russellville, AR

Parameter	Valid Data Points	Mean	Minimum	Maximum	Standard Deviation
Dissolved Oxygen (mg/L)	57	7.81	4.00	12.60	1.93
BOD5 (mg/L)	55	1.37	0.29	5.60	1.03
pH (standard units)	57	7.06	6.35	7.68	0.30
Total Organic Carbon (mg/L)	58	6.33	4.059	10.40	1.07
Ammonia as N (mg/L)	59	0.16	<0.005	1.69	0.27
NO ₂ +NO ₃ as N (mg/L)	59	8.51	0.168	23.90	4.37
Orthophosphate as P (mg/L)	59	3.48	<0.005	8.54	2.27
Total phosphorus as P (mg/L)	58	3.63	0.37	8.23	2.13
Total Hardness (mg/L)	29	56.17	17	124.00	19.09
Chloride (mg/L)	60	43.25	2.98	96.40	23.64
Sulfate (mg/L)	60	38.16	11.8	70.90	11.28
Total dissolved solids (mg/L)	47	262.99	35.5	424.50	103.15
Total Suspended Solids (mg/L)	48	48.9	<1.0	1348.00	206.77
Turbidity (NTU)	58	33.51	2.7	630.00	106.48

ARK0067 Sampling Site



5.13 Rain Gauges

Six temporary rain Gauges were installed to determine the amount of rainfall that occurred during the system wide flow monitoring study conducted by RJN Group in 2010. The temporary rain gauge locations are shown in Appendix 17. See Appendix V for Permanent Rain Gauge Specifications. In 2013, City Corporation will order and install eight permanent rain gauges around the city to monitor rainfall events. The permanent gauges will allow City Corporation to track rainfall throughout the city. Furthermore, it will provide rainfall data for smaller portions of the system. City Corp will be able to isolate overflows and localized rainfall amounts at the time of the overflow. The permanent rain gauge locations are shown in Appendix 18.

Table 5-6: Temporary Rain Gauge Locations

Name	Location
RG01	2221 Skyline Dr (Western Hill Pump Station)
RG02	500 N. Glenwood Ave. (Prairie Creek Pump Station)
RG03	915 Arkansas (Steve Standridge Insurance)
RG04	404 Jimmy Lile Rd (Pollution Control Works)
RG05	2606 E Main St (Furniture Factory Outlet)
RG06	1920 N Arkansas (Station Fire Department)

Table 5-7: Permanent Rain Gauge Locations

Location
Shiloh Manor Pump Station
Prairie Creek Pump Station
10 th Street Pump Station
Lift Station "B"
Cove Landing Pump Station
Water Treatment Plant
Pollution Control Works
International Paper Lift Station

5.14 Inspection Procedures and Specifications

All Plans for proposed extensions of the sewage collection system shall be prepared by and bear the stamp of a Professional Engineer currently registered by the Arkansas State Board of Registration for Professional Engineers and Land Surveyors and shall conform to the latest edition of the "City Corporation Standard Specifications and Details and Policies and Procedures." Standard Specifications and Details are included in Appendix U. The current specifications were written in 1995 and are currently in the process of being revised. Revised standard specifications and details should be complete in 2013. Policies and Procedures are included in Appendix W.

City Corporation's approval of a plan for a particular sewer main extension is contingent on several standard conditions:

- The engineer of record must also submit the same plan to the Arkansas Department of Health and to any other agencies or local entities for approval. City Corporation does not submit proposed plans to regulatory agencies or local entities for approval.
- No construction is permitted on the proposed sewer main extension until City Corporation, the regulatory agencies and all local entities have approved the proposed plans in writing. In addition, approval of the Russellville City Council is required for any proposed service outside of the City limits.
- Approval of proposed plans for sewer main extensions by City Corporation is subject to the condition that all materials, construction procedures and tests are to be as specified in the latest edition of the City Corporation Standard Specifications. The only deviations from published City Corporations Standards, which are permitted, are those which are specifically approved in writing by City Corporation for particular sewer main extensions proposed.
- City Corporation inspectors do not have the authority to waive or modify City Corporations standard in the field.
- When City Corporation approves plans for sewer main extensions, the approval process does not stop with the plan approval. The City Corporation approval is with the express understanding that the engineer of record will remain responsible for the construction as shown on the approved plans, until all work is complete and the project has been "Accepted for Service" by the City Corporation.
- The engineer of record for an approved sewer main extension is responsible for advising City Corporations when construction is to begin on the proposed sewer main extensions. Please provide a minimum of 24 hours notice of commencement of construction. If construction is to be performed on a weekend, holiday or after normal working hours (8:00 a.m. to 4:30 p.m.), make arrangements in advance for a City Corporation inspector to be present.
- No permits for sewer taps will be issued for main extensions, which have not been "Accepted for Service" by City Corporation. "Accepted for Service" is defined as follows:
 1. All construction and cleanup is complete and all tests have been passed with the documentation in City Corporation files.
 2. As-Builts have been received by City Corporation and have been field checked and found acceptable.
 3. All appropriate agreements have been executed and filed with City Corporation. All applicable pro-rata rebates have been collected.

4. Easements and/or street dedications have been filed for record in the Courthouse and copies furnished to City Corporation.
5. City Corporation has by letter accepted the main extension for service and maintenance, subject only to the one-year's maintenance period.

CHAPTER 6- SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

The concept of capacity for a wastewater system has two basic elements; the capacity of the wastewater plant and the capacity of the collection system. Inflow/infiltration and growth can result in wastewater flows exceeding the design capacity of either the plant or collection system or both. RJN Group has been contracted by City Corporation to complete a thorough evaluation of the capacity of the system. The Sanitary Sewer Evaluation Survey (SSES) will entail several key components to assist City Corporation with future repair efforts and hydraulic upgrades to the system. The components of this study are detailed below.

6.1 System Wide Flow Monitoring/Capacity Analysis- Phase I

Phase I of the Sanitary Sewer Evaluation Survey (SSES) includes a System Wide Inflow/Infiltration (I/I) Analysis. RJN divided the system into 27 distinct subbasins. Each subbasin was monitored through the installation of flow meters. Appendix 19 shows the locations of the flow meters. The meters were monitored and analyzed for a period of 53 days. Rain gauges were also installed throughout the system to correlate rainfall information with the resulting flow data. Areas that exhibited high amounts of I/I were listed as priority basins. These basins will be studied in more detail as described in 6.2 below.

Concurrent with the flow monitoring, RJN updated the system maps for all lines 10-inch in diameter and larger. All manholes on these lines were GPS surveyed to ensure accuracy and each manhole was inspected for signs of I/I and structural soundness. As a result of the survey information, a hydraulic model network was developed for all 10-inch in diameter and larger lines, selected 8-inch diameter lines, and all major pump stations. The model will be used along with the flow monitoring data to identify collection system capacity issues. Also included in Phase I of the SSES was a review of all 19 lift stations as discussed in 6.1.3 below.

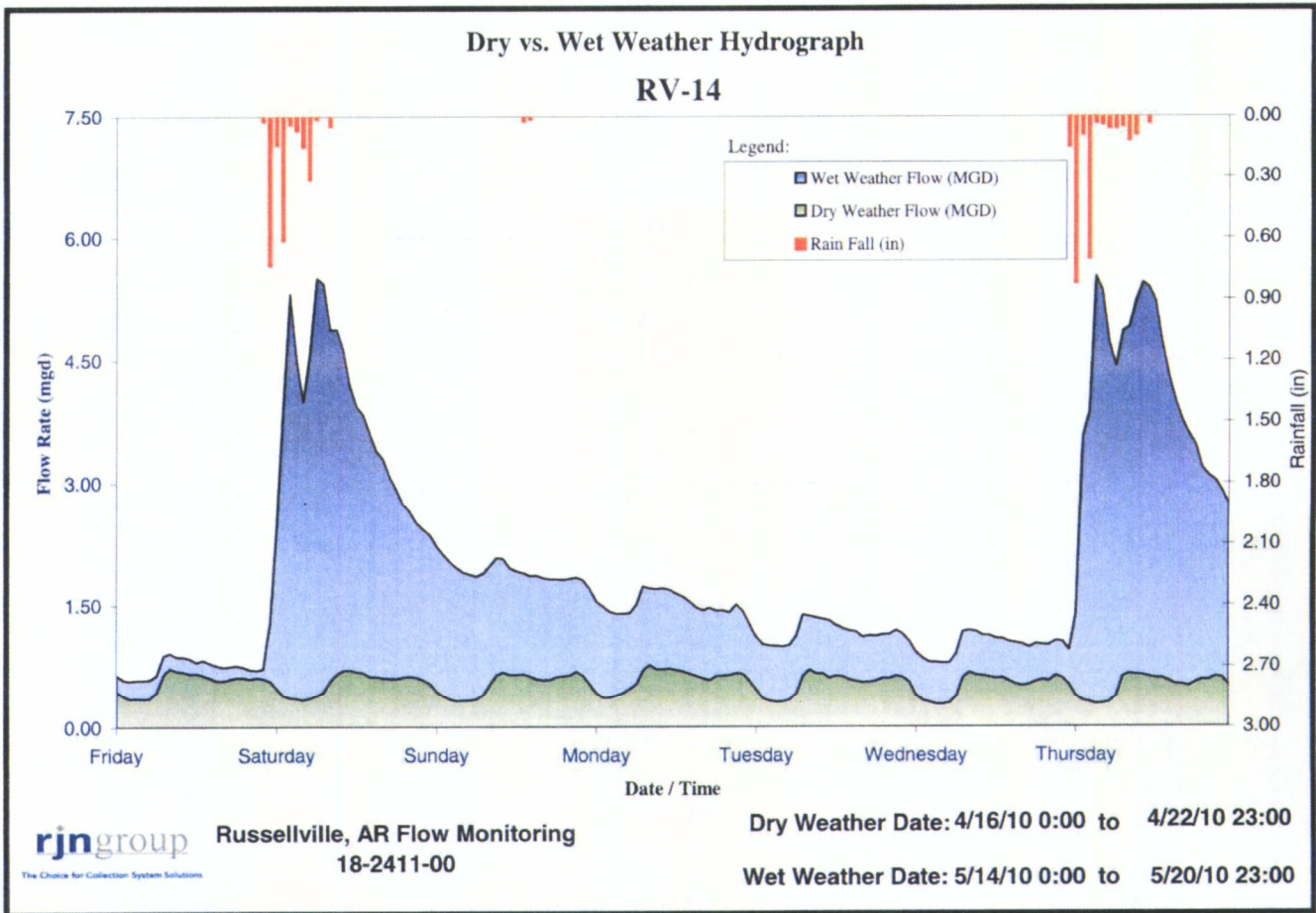
RJN has developed a detailed report for all Phase I activities. The report provides the results of the flow monitoring and capacity analysis including recommendations for further investigation. The recommendations are based on the amount of inflow and infiltration contribution from each subbasin. The I/I ranking was to be used to develop a prioritization for each basin, along with a milestone schedule for studying the high priority basins. Wet and Dry Peaking factor results of the study can be found in Appendix X.

6.1.1 Flow Monitoring

Concurrent with establishment of the I/I program, a comprehensive evaluation of I/I within the City was undertaken through a Consultant. RJN Group, Inc. performed a city-wide flow monitoring program during the spring of 2010. A total of 31 ADS flow meters were used to monitor wastewater flow from March 15, 2010 to May 24, 2010 for a period of 53 days. Six rain gauges were also installed to determine the amount of rainfall that occurred during this period. While the initial city-wide monitoring effort included basins comprising on the order of 939,871 linear feet of sewer, the follow-up monitoring effort included only about 30,000 linear feet per monitor. Each of these smaller basins was evaluated with respect to infiltration and to inflow, and a recommendation was made for each of the parameters. In general, if an area was considered cost-effective for inflow removal, manhole inspection, smoke testing, dye testing, and repair were recommended. If an area was considered cost-

effective for infiltration removal, manhole inspection, sewer cleaning, television inspection, and repair were recommended. For areas where both infiltration and inflow appeared excessive, all of these activities were recommended. Figure 6-1 is an example of Peak flow during a rain event.

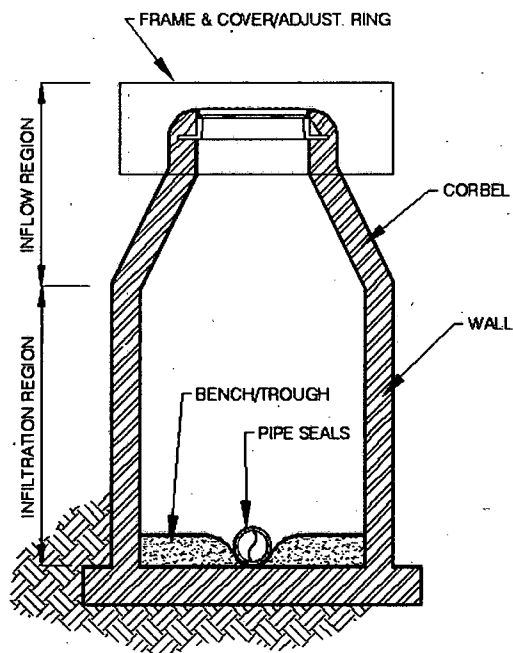
Figure 6-1:Hydrograph



6.1.2 Manhole Inspection

Manhole inspections were performed on selected manholes to verify system mapping, collect coordinates and invert elevations for construction the hydraulic model. All manholes were physically descended and visually inspected unless deemed unsafe or unable to descend. All manholes were inspected for defects and restrictions. Figure 6-2 shows the main parts of a standard manhole.

Figure 6-2: Parts of a Standard Manhole



The following data was recorded for each manhole:

- Location and identification number
- Potential for ponding on manhole cover
- Cover type, fit, distance above or below grade, evidence of inflow
- Frame adjustment, type and condition of seal, evidence of inflow
- Corbel construction, condition, evidence of inflow
- Wall construction, condition, evidence of infiltration
- Bench/trough construction, condition, deposition, evidence of infiltration
- Pipe seal condition, evidence of infiltration
- Step and rung conditions
- Manhole inside diameter
- Surcharging or evidence of surcharging
- Indication of groundwater level at time of inspection
- Maintenance problems
- Line segment diameter and direction
- Line segment observations from manhole

Approximately 700 manholes serve as access structures for 10 inch and larger diameter pipes and selected 8 inch diameter pipes and were selected for inspection. RJN completed 659 of the 698 manhole inspections attempted and identified 11 inaccessible, 2 buried, and 26 not found manholes. Table 6-1 shows the findings in more detail.

Table 6-1: RJN Manhole Findings

Basin	Total	Inspected	Not Found	Buried	Inaccess- sible
RV01	16	14	2	0	0
RV02	42	39	3	0	0
RV03	32	29	3	0	0
RV05	21	20	0	1	0
RV07	96	93	1	0	2
RV08	2	2	0	0	0
RV09	51	47	3	0	1
RV11	65	62	2	0	1
RV13	4	4	0	0	0
RV14	65	57	5	0	0
RV15	21	20	1	0	0
RV16	17	17	0	0	0
RV17	5	5	0	0	0
RV18	34	32	1	0	1
RV19	10	10	0	0	0
RV20	34	34	0	0	0
RV21	27	26	0	0	1
RV22	31	31	0	0	0
RV23	11	10	0	0	1
RV24	60	56	3	0	1
RV26	19	17	0	0	2
RV27	22	18	2	1	1
RVUM	16	16	0	0	0
TOTAL	698	659	26	2	11

A total of 311 manholes were found to have evidence of surcharging during the manhole inspections activities. Table 6-2 shows the findings.

Table 6-2: RJN Manhole Defects

Type of Defect	Number of Defects
Pick Holes	304
Cover Missing Bolts	10
Broken Cover	24
Defective Frame Seal	96
Broken Frame	32
Manhole Rim Leaks	15
Defective Manhole Corbel	53
Defective Wall	122
Cracked Pipe Seal	86
Cracked Bench/Trough	32
Total	774

6.1.3 Lift Station Evaluation

RJN Group, Inc. evaluated all 19 lift stations from July 19, 2010 through July 23, 2010. The purpose of the evaluation was to assess the performance of each pump station and determine the firm pumping capacity of each station for use in the preparation of the hydraulic model. Appendix 20 shows the locations of lift stations.

Field information collected during site investigations at each of the lift stations uncovered an array of lift station types, including pump and wet well variations. Lift station configuration ranges from duplex, alternating pump to triplex, dual pump operation. The recommendations from the evaluation are in Table 6-3. City Corporation will continue to work on the upgrades until they are complete.

Table 6-3: RJN Recommendations for Lift Station Improvements

Lift Station	Improvements
10 th Street	None
23 rd Street	Redesign and Re-evaluate drainage system for the dry well
Lift Station "A"	Alleviating the drainage issues within the vault and correcting rust concerns
Lift Station "B"	Alleviating the drainage issues within the vault and correcting rust concerns
Lift Station "C"	None
Center Valley	None
Cove Landing	None
Darling	None
Grace	None
International Paper	Repair any corroded or rusted components
Lost Corner	None
Main Street	Replace Pump 1 and provide reliable emergency option, evaluate condition of wet well and ventilation system
Old Post	Rehab wet well
Prairie Creek	Repair wall leak, Evaluate condition of wet well and ventilation system
Rimrock	Schedule more frequent removal of Grease
Shadow Valley	Investigate why pumps are not running at full power
Shiloh Manor	Schedule more frequent removal of Grease
Tex Vet	Alleviating the drainage issues within the vault and correcting rust concerns
Tyson	Schedule more frequent removal of Grease

6.1.4 Capacity Improvements

RJN recommended improvements on the overall sanitary sewer system to reduce the I/I 30% and included proposed growth to the city of Russellville. Shown below on table 6-4 are the recommendations RJN has made and the future or current project the lines will be associated with and their proposed design time.

Table 6-4: RJN Recommendations for Overall Capacity Improvements

Project Name	Improvements Recommended	Design Timeline
10 th Street FM.	Upsize 5,664 LF 10" Force Main to 12"	Design 2015
Prairie Creek FM.	Upsize 8,616 LF Force Main to 24"	Design 2017
Hydraulic Capacity Improvements	Upsize 2,055 LF 8"-10" Upsize 1,676 LF 10"-12"	Design 2013
ATU South	Upsize 321 LF 6"-8" Upsize 714 LF 8"-10" Upsize 3,059 LF 10"-21" Upsize 998 LF 15"-24" Upsize 1,607 LF 15"-27" Upsize 158 LF 10"-27" Upsize 76 LF 24"-30"	Design 2015
East 2nd Street Wastewater Improvements	Upsize 597 LF 10" 14" Upsize 8,520 LF 10"-18"	In Construction
City Mall Wastewater Improvements	Upsize 5,462 LF 8"-12" Upsize 2,729 LF 18"-24"	In design
7,14 & 23	Upsize 355 LF 15"-21"	In design
ATU North	Upsize 7,720 LF	To be Designed by Garver

6.2 System Wide Flow Monitoring/Capacity Analysis- Phase II

The high priority basins resulting from the flow monitoring studies will be further examined in Phase II. The studies of the priority basins will involve extensive field investigation in an effort to quantify the results of the I/I Analysis. The following field activities will be part of the Phase II investigations:

- Manhole Inspections
- Additional Flow Monitoring
- Smoke Testing
- Dyed Water Flooding
- Cleaning
- Television Inspection

A detailed report for each subbasin studied will be developed by the engineer at the conclusion of the Phase II activities. The report will include a capital improvement plan which includes a rehabilitation plan, capacity improvements; a staged priority schedule, and budget costs for the recommended improvements. The report will also include a narrative description of the hydraulic analysis and field investigations. Phase II will be included in more detail in future CMOM updates.

6.2.1 Subbasins 7,14,23 SSES Findings & Design Plans

The three subbasins included a total of 146,868 linear feet of sanitary sewer lines. A detailed map of the subbasins and the current study phase they are in is included in Appendix 13. RJN Group, Inc. has finished an extensive study of the collection system in subbasins 7,14,23. The following is a summary of the work performed and the defects found:

Work Performed

Manhole Inspections	338	EA
Smoke Testing	133,531	LF
Dyed Water Testing	32	Areas
TV Inspection	29,231	LF

Defects Found

Root Growth	60	Locations
Longitudinal Cracks	10	Locations
Circular Cracks	52	Locations
Collapsed Pipe	6	Locations
Offset Pipe	31	Locations
Broken Pipe	39	Locations
Manhole Defects	114	Locations
Building Lateral Defects	159	Locations
Defective Cleanout	142	Each

The goals for this project are:

- Improve overall sewer system
- Reduce I/I
- Eliminate Overflows
- Reduce Maintenance Calls
- Reroute main sewer line from under business and home

A map of the lines to be rehabbed in this project is located in Appendix P. The projects estimated construction cost is \$3,000,000. The following is a brief description of the work to be performed:

7,14 & 23

Description	Quantity	Units
CIPP Existing 6"	126	LF
CIPP Existing 8"	2140	LF
CIPP Existing 10"	1905	LF
CIPP Existing 12"	1191	LF
CIPP Existing 15"	680	LF
CIPP Services	96	EA
Pipe Burst 6"-8"	3274	LF
Pipe Burst 10"-10"	791	LF
Relay/Install 6"-8"	9184	LF
Relay/Install 10"-10"	463	LF
Relay/Install 18"-21"	402	LF
Reinstate Services	282	EA
Construct Manholes	24	EA
Stormwater Controls	1	LS
Bypass Pumping	1	LS
Trench & Safety	1	LS

6.2.2 Subbasins 1,2,8,11 SSES Findings & Design Plans

The four subbasins included a total of 126,967 linear feet of sanitary sewer lines. A detailed map of the subbasins and the current study phase they are in is included in Appendix 13. RJN Group, Inc. has finished an extensive study of the collection system in subbasins 1,2,8,11. The following is a summary of the work performed and the defects found:

Work Performed

Manhole Inspections	376	EA
Smoke Testing	113,818	LF
Dyed Water Testing	53	Areas
TV Inspection	22,514	LF

Defects Found

Root Growth	21	Locations
Longitudinal Cracks	2	Locations
Circular Cracks	21	Locations
Collapsed Pipe	5	Locations
Offset Pipe	23	Locations
Broken Pipe	6	Locations
Manhole Defects	115	Locations
Building Lateral Defects	72	Locations
Defective Cleanout	89	Each

The goals for this project are:

- Improve overall sewer system
- Reduce I/I
- Eliminate Overflows
- Reduce Maintenance Calls
- Reroute main sewer line from under home

A map of the lines to be rehabbed in this project is located in Appendix T. The projects estimated construction cost is \$2,100,000. The following is a brief description of the work to be performed:

1,2,8 & 11

Description	Quantity	Units
CIPP Existing 8"	1353	LF
CIPP Existing 24"	2842	LF
CIPP Services	16	EA
Pipe Burst 6"-8"	4410	LF
Pipe Burst 8"-10"	783	LF
Pipe Burst 8"-8"	375	LF
Relay/Install 6"-6"	112	LF
Relay/Install 6"-8"	1286	LF
Reinstate Services	99	EA
Construct Manholes	4	EA
Stormwater Controls	1	LS
Bypass Pumping	1	LS
Trench & Safety	1	LS

CHAPTER 7-OVERFLOW EMERGENCY RESPONSE PLAN

7.1 Awareness

In order to respond effectively to a sewer overflow, a plan must be in place prior to the overflow and all personnel need to understand their role in the response and follow up. The following SSO Response Plan Summary describes the actions that will be taken in the event of an overflow of the collection system. The full Overflow Response Plan is located in Appendix Y.



7.2 Response

The Sanitary Sewer Overflow Response Plan (SSORP) is designed to ensure that every report of a confirmed sewage overflow is immediately dispatched to the appropriate crew so that the effects of the overflow can be minimized with respect to impacts to public health, beneficial use, quality of surface waters, and customer service. The SSORP further includes provisions to ensure safety pursuant to the directions provided by the ADEQ and that notification and reporting is made to the appropriate local, state, and federal authorities. For purposes of this SSORP, "confirmed sewage spill" is also sometimes referred to as "sewer overflow," "overflow," or sanitary sewer overflow "SSO". The 24 Hour SSO Report and the SSO Monthly Report are located in Appendix Z.

7.3 Official Notification

Official Notification of SSO during working hours

Customer Service Representative (CSR) receives notification of a possible SSO from the public. The CSR will route the call to the Network Operations Center at which time all relevant information is collected, as outlined in Section IV-A. NOC will then dispatch the appropriate Response Crew to the site to verify if an SSO has occurred. The Response Crew will report findings back to NOC.

Response Crew determines if SSO has occurred and attempts to resolve problem. Response Crew completes the Overflow Report Form, takes photographs before clean-up is started, and places warning sign(s) at the site,

as required. Construction Supervisor verifies Overflow Report, problem resolution, and signage have been appropriately addressed.

On all public overflows, Response Crew begins cleanup and disinfection of the affected area. Response crew will notify Network Operations Center when cleanup is complete. NOC will dispatch Construction Supervisor to verify cleanup is completed, take photographs and remove warning signs.

All private overflow calls are directed to the Network Operations Manager. The customer is then directed to contact their individual insurance carrier for coverage and is encouraged to work with insurance company to complete cleanup. Because of the nature of a private overflow, City Corporation recommends the use of a professional restoration service to complete the cleanup. City Corporation employees are not allowed to work inside private/commercial addresses.

Official Notification of SSO after working hours

After Hours Emergency Crew receives direct notification of possible SSO from public at which time they collect all relevant information as outlined in Section IV-A and proceed to location. (After Hours Emergency Crew mans emergency phone after business hours)

Emergency crew determines if SSO has occurred and attempts to resolve problem then takes photographs before cleanup and places warning signs at site, as required. Emergency Crew is to fill out Overflow Report Form and turn in with their paper work at the beginning of the next workday.

On all public overflows, Emergency Crew then begins clean-up and disinfection of the affected area. When cleanup is completed, crew is to take photographs and remove warning signs. Site visit is to be performed the first work day after the overflow occurrence.

All private overflow calls are directed to the Network Operations Manager. The customer is then directed to contact personal insurance for coverage and restorations service for cleanup. City Corporation employees are not allowed to work inside private/commercial addresses.

Internal Notification of possible SSO

All City Corporation personnel are directed to immediately report any potential overflow to the Network Operations Center and provide all relevant information as outlined in Section IV-A. After the overflow has been reported, all procedures will be the same as with a public notification of possible SSO above.

Rain events that are one-inch or greater will trigger our Response Crews to investigate possible recurring SSO sites to verify if an overflow has occurred. These crews will be furnished a list of possible SSO sites (see appendix E), which has been determined as being locations that have potential to overflow. After crews have completed a check of the entire list, they will begin clean-up at each site. Appendix 21 is a map showing the recorded overflow locations.

Chart 7-1: Total Overflows

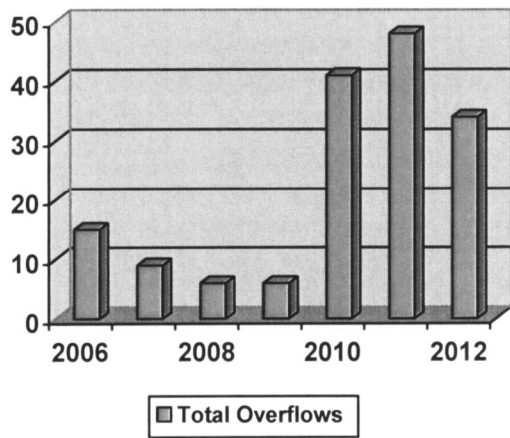
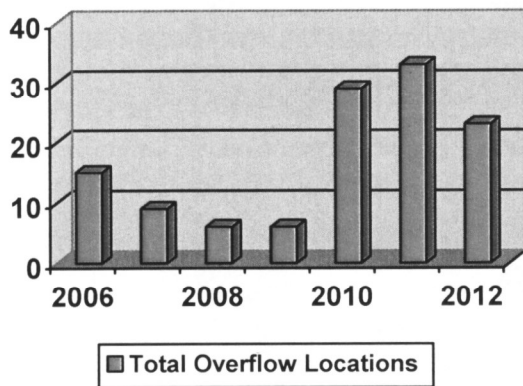


Chart 7-2: Total Overflow Locations



CHAPTER 8- FINANCIAL

8.1 User Rate/User Charge

Sewer service charge

Monthly residential sewer service charge is computed on the average water used in the month of January, February, and March of each year. In general, these are the months when residential customers use the least amount of water and when water issued is going into sanitary sewer for treatment.

Charges for *new* domestic users will be based on the water consumption of a typical user of the same or similar class until a water use history is established and the average computed. Charges for all other classes of customers (commercial, industrial, etc.) are based on the same rate but are computed each month according to the amount of water used.

Charges for all classes of customers who are located outside the City Limits of Russellville are computed at 1 ½ the normal rate.

Charges are computed in compliance with city ordinances and rates as follows:

First 1,000 Gallons Per Month	\$6.67 Per Month
Next 19,000 Gallons Per Month	\$2.59 Per 1,000 Gallons
Over 20,000 Per month	\$2.20 per 1,000 Gallons

There will be an additional monthly charge of \$5.00 to those customers who require a grinder pump system.

This charge is in addition to the initial purchase price of the grinder pump and normal installation cost.

See Appendix 7 for the Sewer & Water Rate Flyer.

8.2 Budget Process and Schedule

The Budget process and schedule can be found in Appendix 1.

CHAPTER 9-PROGRAM AUDITS

9.1 Summary

The foregoing Capacity, Management, Operation and Maintenance Program for the sanitary sewer system owned by City Corporation reflects the commitment to the protection of the environment and continued provision of exemplary customer service. As indicated throughout this document, City Corporation has committed and is prepared to further commit the resources necessary to provide vigilance over the wastewater system. Necessary funds and staffing are available through operating and capital budgets and required contractual arrangements are either already in place or can be readily accomplished. This document will be updated annually through revisions to reflect the City Corporation's commitment to its mission and to satisfy federal and state regulatory requirements. This CMOM document, appendices, and supporting documents are presented on the CMOM link on the City Corporation web site. The CMOM Program is viewed as a working document with the most current data available that reflects the latest collection system conditions.

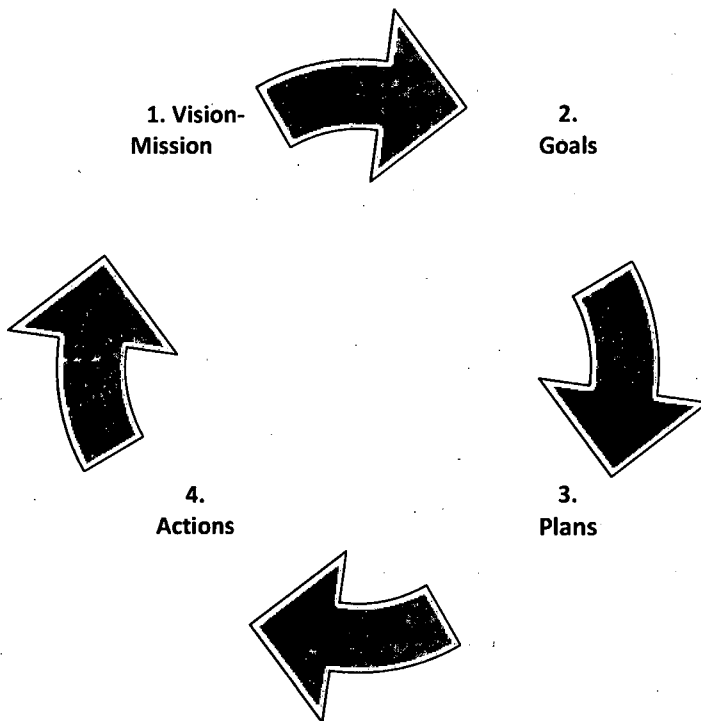
9.2 Program Updates

This plan lays out metrics for employee training, routine maintenance, repairs, and system monitoring. The plan is essentially the business plan for the sewer system of City Corporation. The program is developed as a guidance manual for the entire staff and customers of City Corporation. City Corporation, along with their consulting engineer, will evaluate adherence to these metrics and the goals of this program on an annual basis. The plan will be modified to incorporate new information from current studies, new technology, and any additional changes, at City Corp's discretion, based on the annual evaluation. The General Manager is expected to require all employees to adhere to this plan in the performance of their individual duties.

CHAPTER 10-SUMMARY OF RECOMMENDATIONS

10.1 Strategic Planning Process

- Strategic Planning will be done under the guidance of City Corporation's Mission-Vision Policy. The following graphic shows how the Strategic Planning Process works.



- Strategic Planning defines the five-year business oriented goals and establishes a Strategic Plan to accomplish these goals. The Strategic Plan expresses the Vision of City Corporation and attempts to guide our efforts in that direction. Individual action items and action plans are developed to direct the work to be accomplished. The Strategic Planning Process is broken down in more detail in Appendix 22.

10.2 Construction/As-Built Recording Procedure

- Retrieve all drawings from Russellville and Engineers
- Label all As-Built with a numbering system (Example: Year-001)
- Scan all drawings
- List As-Built in an Excel file for easy searching and usage
- Excel file should include the following: As Built #, Name of Project, and Grid Location

10.3 Force Mains

- Elimination of air entrainment in interceptor force mains is absolutely essential to reduce corrosion and failure of force mains due to sulfuric acid attack. Air entrainment in interceptor force mains is the result of improper design and/or operation of pump stations since air can only enter a force main via a pump station. Air

entrainment in interceptor force mains must be eliminated by proper design and/or operation of pump stations and force mains as follows:

10.3.1 Operating Practices

- Minimize wet well turbulence and splash.
- Eliminate free discharge or falling jets from incoming sewers and force mains by:
 - Raising minimum wet well levels to minimize or eliminate drops.
 - Directing incoming flows below the minimum wet well level using chutes.
 - Directing incoming flow away from pump suction lines.
 - Relocating air relief discharges, sump pump discharges, and bubbler control discharges away from pump suction lines.
- Eliminate vortex formation at pump suction lines by raising minimum wet well level to submerge pump suction lines.
- Operate all installed force main air vents periodically with a frequency depending upon experience and air accumulation at each air vent.
- Install and operate additional air vents where needed and not originally installed.

10.3.2 Design Practices

- Minimize wet well turbulence and splash.
- Establish wet well levels as high as possible with respect to the incoming sewers and force mains.
- Avoid free discharge or falling jets from incoming sewers and force mains onto the wet well liquid surface.
- Locate air relief discharges and sump pump discharges as far away as possible from pump suction inlets.
- Select force main profile to minimize the number of high points.
- Provide air vents at profile changes from an upward slope to a relatively flat or downward slope.
- Provide air reliefs at one half-mile intervals on long ascents, descents or horizontal sections between defined high points.

10.4 Rehabilitation

10.4.1 Main Lines

City Corporation must identify and prioritize all structural deficiencies and set short-term and long-term rehabilitation actions to address each deficiency. Overall, the utility must provide a structured approach for gathering, storing and analyzing costs related to the planning, engineering, design, construction, start-up, operations, maintenance, energy use, rehabilitation, refurbishment and disposal of its assets. The structured approach is necessary to have the information available when making asset management decisions.

10.4.2 Manholes

Manholes are underground chambers to provide man-entry access to maintain utility pipelines. They usually are subjected to underground corrosive environments and traffic loads which accelerates the degradation process of these structures. As they are underground and out of general sight, degradation of these structures is not usually monitored unless a collapse or problem occurs.

With the advancement of pipeline rehabilitation techniques and technologies, defects and problems in manholes are now receiving increased attention. Engineers and municipalities have realized the benefits of rehabilitation repairs to manholes. As leaks which are prevented from repaired pipes are only re-directed to the next weakest part of the system which are usually the manholes. As manhole rehabilitation is an integral part of the whole pipeline rehabilitation process, neglecting it and only concentrating on the pipe, just shifts the problem and defeats the rehabilitation process. A benefit to manhole rehabilitation is that it is usually the easiest and the least costly repair process. The restoration of these manholes is done in less time that it would take to replace them and for a fraction of the cost. It can be carried out within two to three hours without much disruption to above ground activities and environment. By rehabilitation of these manholes, cities are able to prolong the lifespan of the structures. Appendix 2 contains an example of a Manhole Inspection form. It is recommended that Standard Specifications and Details for Manhole Rehabilitation should be included in the updated Standard Specifications and Details to be completed in 2013.

10.5 CCTV Report/Inspection

RJN has begun to assess the condition of all City Corporations facilities and recommend upgrades, as necessary. As part of enhancing the integrity of City Corporations network of gravity mains, RJN uses a CCTV van to inspect parts of the gravity

pipelines. CCTV inspection is a non-destructive, proactive approach to evaluate the pipeline infrastructure and is required to assess the condition of the pipeline interior. A CCTV inspection may be utilized to:

- Inspect conditions and determine the location of problem areas such as pipe or joint separations, drops, ruptures, leaks, obstructions, deterioration, pipe misalignment, and root intrusions.
- Locate infiltration and inflow sources.
- Look for damage to sewers caused by excavation and construction.
- Search for unrecorded connections, such as illegal taps.
- Evaluate effectiveness of pipeline repairs, replacement, and/or rehabilitation within the sewer system.
- Assess pipeline condition of new installation before the warranty period ends.

CCTV inspection reports and videos are generated after each evaluation.

10.6 Public Education/Outreach

The City's Fats, Oils and Grease (FOG) Public Education program has been designed to reach as many local residents and businesses as possible. City Corporation is committed to minimizing FOG and other pollutants from entering the sanitary sewer system.

Residential and commercial activities such as the disposal of cooking grease, oil, food scraps, household and industrial strength chemicals, and even pharmaceuticals into the sanitary sewer, can have an impact on the City's ability to protect human health and the environment. Through the reduction and potential elimination of Sanitary Sewer Overflows (SSOs), the streets, surface waters, and ultimately the ocean are at less risk of containing harmful levels of bacteria, viruses or chemicals that have the potential to cause harm.

As part of the City Corporation's program to educate and assist city residents and businesses in implementing Best Management Practices to reduce pollutants entering the sanitary sewer system, the City should use a variety of tools such as brochures, posters, videos, public service announcements, community events, commercial and industrial inspections, and partnering with other agencies to promote the FOG program. The materials available are shown below.

Brochures

An educational brochure has been developed for city residents through a program with the goal of preventing SSOs. The brochures are free and are available at many city facilities including, City Hall and libraries. The brochures contain information that can be used by residents and businesses to educate employees, tenants, neighbors, and family members. An example of a Food Service Brochure is shown in Appendix 3. An example of a Sewage Spill Brochure is shown in Appendix 4.

Posters

An educational poster has been developed for restaurant use with the goal of preventing SSOs. The poster is free and has been made available to all city restaurants. The poster contains information that can be used by owner to educate their employees. An example is shown in Appendix 5. Posting this poster in an area that is frequently visited by the employees will help to educate them on the correct ways to dispose of FOG.

10.7 Easement Clearing

City Corporation generally holds a ten foot wide permanent easement along its sewer lines. While some other individual or entity normally owns the underlying property, City Corporation has the right to access and maintain the line. This is not an issue in areas where sewers cross undeveloped property; however, issues have arisen from homeowners when easement clearing is needed in developed areas.

Currently there is not an easement clearing procedure in place for City Corporation. In response to an increasing need for access to remote sewer lines, it is recommended that City Corporation adopts a more aggressive approach to easement clearing using a ten-foot path. It is anticipated that this program will enhance the ability to effectively operate its sewer system. In addition, cleared areas should be mowed annually.

The development of a trail system in conjunction with sewer easements is growing in popularity around the country. We feel City Corporation could see tremendous benefits from partnering with the city to provide trails along existing sewer easements. It provides some key benefits for the city, including:

- A great way to improve the city
- Enables maintenance and easement access
- Provides recreational activities

10.8 Aerial Stream Crossing Inspection

City Corporation operates and maintains approximately 180 miles of sanitary sewer with an unknown number of aerial sewer stream crossings of six-inch size and above. Parts of the system are over fifty years old.

It is recommended that City Corporation develop an aerial sewer stream crossing inspection and operation & maintenance program. This program will include an inspection schedule with forms to identify required preventive and routine maintenance for City Corporation's aerial sewer stream crossings.

This program also is being developed to supplement the City Corporation's Capacity, Management, Operation & Maintenance (CMOM) program, and to satisfy the provisions of the AR EPD regarding their Consent Administrative Order (CAO) to Address Sanitary Sewer Overflows (SSOs).

The goal of the inspection program is to inspect, remove debris, and repair as required, all major sewer trunk crossings six inches or more in diameter within the major drainage basins, and then perform a scheduled, regular, preventive maintenance inspection. To conduct the initial inspections, a process should be developed that includes the completion of an inspection form and digital photographs of the crossing. A copy of the form is included as Appendix 6. The form was designed to allow the inspectors to grade each crossing to determine the severity of any debris removal or repair that may need to be made. Additional data on the crossing such as manhole numbers both upstream and downstream, general condition, type of crossing, easement condition, and a sketch shall be completed.

City Corporation will use their Record System to store all inventory and inspection data, all digital photographs, and to generate preventive maintenance work orders for periodic inspection of all sewer aerial crossings. From an initial inspection, each crossing will be graded to determine the frequency of future inspections. Larger line crossings suspended over major streams will be inspected more frequently than smaller line crossings that may only be partially exposed in smaller streams. The digital photographs from the initial inspection will be compared to subsequent inspections and photographs to adjust the inspection frequency in addition to the inspection grade. The work order system will automatically generate work orders to conduct repeat inspections.

City Corporation has developed a stream crossing log sheet that they use when inspecting aerial stream crossing. The log sheet and current findings are located in Appendix 9.

10.9 Industrial Stormwater Control

City Corporation experiences significant sources of Inflow and Infiltration from industries throughout the city. The recent system wide evaluation from RJN identified the industrial subbasins as some of the highest inflow problems in the entire collection system. Industries can have illegal taps and direct storm water connections that significantly add to the wastewater flows in the sewer system. It is recommended that City Corporation make a concerted effort to prevent industrial stormwater from entering the sewer system through active monitoring, enforcement of existing ordinances, and enactment of additional ordinances or regulations for stormwater.

10.10 Record keeping program

City Corporation currently has what is called the "AS/400" a master log program used for keeping all the companies records and work orders. This program appears to be dated and difficult to use. It is recommended that City Corporation evaluate a new record keeping program.

10.11 City Grid System

City Corporation currently utilizes a manhole numbering system. The method for numbering the manholes is not based on geography, and therefore is difficult to use when locating manholes in the system. It is recommended that City Corporation evaluate a new Grid System to help break down large unmanageable areas into smaller easily identified areas of the city. City Corporation is currently in the process of creating a new numbering system, which should be in place by next year.

10.12 Schedule of Recommended Improvements

Figure 10-1 is a schedule that has been created to give City Corporation and ADEQ a milestone to the activities of the recommended improvements throughout the city, as required by the Consent Administrative Order. The schedule reflects a 10 year comprehensive program including a study phase, a design phase, and a construction phase. The program and corresponding dates may be revised as the program is implemented.

FIGURE 10-1 (12-19-2012)

SSSES SCHEDULE OF EVENTS

SSSES PHASE II

CITY CORPORATION

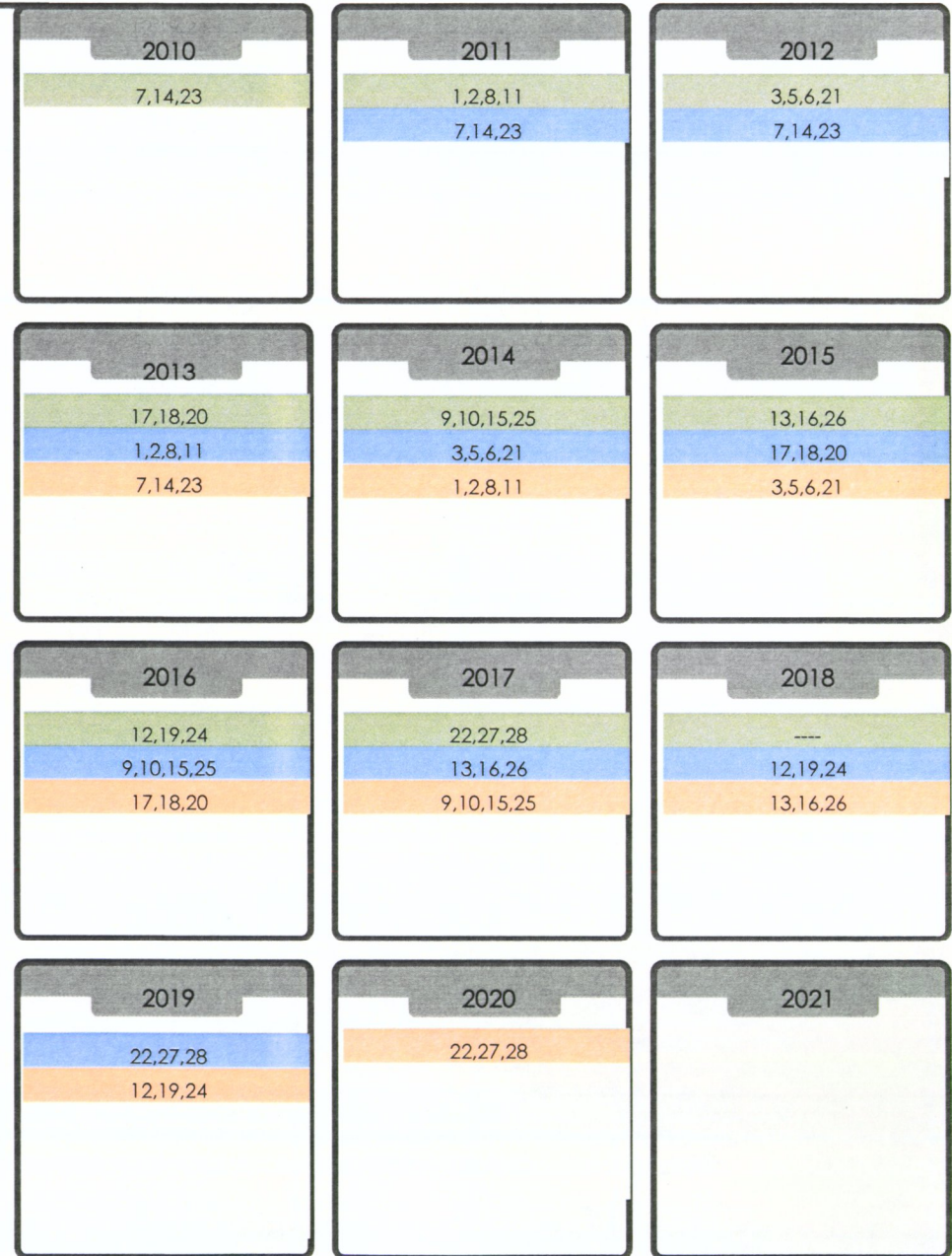
The following schedule is a milestone schedule for SSSES Phase II activities as required by the Consent Administrative Order. The schedule reflects a 10 year comprehensive program including a study phase, a design phase, and a construction phase. The program and corresponding dates may be revised as the program is implemented.

PROJECT PHASE



BASINS	TOTAL LINEAR FEET GRAVITY
7,14,23	146,868
1,2,8,11	126,967
3,5,6,21	120,979
17,18,20	122,371
9,10,15,25	124,812
13,16,26	133,437
12,19,24	122,329
22,27,28	105,826
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SCHEDULE



APPENDIX A

CONSENT ADMINISTRATIVE ORDER 09-146



ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

IN THE MATTER OF:

**Russellville City Corporation
P. O. Box 3186
Russellville AR 72811**

**LIS No. 09-146
AFIN 58-00105
NPDES Permit No. AR0021768**

CONSENT ADMINISTRATIVE ORDER

This Consent Administrative Order (hereinafter "CAO") is issued pursuant to Ark. Code Ann. §8-1-202(b)(2)(B), which authorizes the Director of the Arkansas Department of Environmental Quality (hereinafter "ADEQ" or "Department") to initiate and settle administrative enforcement actions to compel compliance with laws, orders, and regulations charged to the responsibility of the Department, including but not limited to the Federal Water Pollution Control Act, 33 U.S.C §1311 et seq., and the Arkansas Water and Air Pollution Control Act, Ark. Code Ann. §8-4-101 et seq., and all regulations issued thereunder. The Director may also propose the assessment of civil penalties as provided by Ark. Code Ann. §8-4-103(c) and Arkansas Pollution Control and Ecology Commission (hereinafter "APC&EC") Regulation No. 7, Civil Penalties, and take all actions necessary to collect such penalties.

The issues herein having been settled by the agreement of the Russellville City Corporation and ADEQ, it is hereby agreed and stipulated that the following **FINDINGS OF FACT** and **ORDER AND AGREEMENT** be entered herein.

FINDINGS OF FACT

1. Russellville City Corporation (hereinafter "the Permittee") operates a publicly owned treatment works (POTW) in Pope County, Arkansas, pursuant to the conditions of NPDES Permit AR0021768 (hereinafter "the Permit"), issued by the authority of ADEQ and effective April 1, 2005. The POTW discharges treated effluent into Whig Creek.
2. The Permittee has exceeded the effluent characteristic limits in Part I, Section A of the Permit and has therefore violated Ark. Code Ann. §8-4-217(a)(3), which states that it shall be unlawful to violate any provision of a permit issued by ADEQ under the Arkansas Water and Air Pollution Control Act. Violations of the Permit's effluent limits found in Discharge Monitoring Reports (DMRs) submitted by the Permittee to ADEQ since April 2006 are as follows:

<u>DATE</u>	<u>OUTFALL</u>	<u>PARAMETER</u>	<u>REPORTED</u>	<u>PERMITTED</u>
04/30/06	001A	CBOD5 (mo. avg. load)	>414 lb/d	913 lb/d
04/30/06	001A	CBOD5 (mo. avg. conc.)	>9.3 mg/L	15 mg/L
04/30/06	001A	CBOD5 (max. conc.)	>9.5 mg/L	23 mg/L
05/31/06	001A	DO (inst. min.)	3.5 mg/L	6.0 mg/L
05/31/06	001A	TSS (mo. avg. load)	2298 lb/d	913 lb/d
05/31/06	001A	TSS (mo. avg. conc.)	39.7 mg/L	15 mg/L
05/31/06	001A	TSS (7-day avg. conc.)	57.2 mg/L	23 mg/L
05/31/06	001A	CBOD5 (mo. avg. load)	632 lb/d	609 lb/d
05/31/06	001A	CBOD5 (mo. avg. conc.)	10.9 mg/L	10 mg/L
05/31/06	001A	CBOD5 (max. conc.)	17.4 mg/L	15 mg/L
12/31/06	001A	TSS (mo. avg. load)	1931 lb/d	1217 lb/d
12/31/06	001A	TSS (mo. avg. conc.)	33.1 mg/L	20 mg/L
12/31/06	001A	TSS (7-day avg. conc.)	44.2 mg/L	30 mg/L
01/31/07	001A	TSS (mo. avg. load)	1913 lb/d	1217 lb/d
01/31/07	001A	TSS (mo. avg. conc.)	28.8 mg/L	20 mg/L
01/31/07	001A	TSS (7-day avg. conc.)	32.5 mg/L	30 mg/L
01/31/07	001A	Zinc (mo. avg. load)	37 lb/d	5.2 lb/d
01/31/07	001A	Zinc (mo. avg. conc.)	704.1 µg/l	86 µg/l
01/31/07	001A	Zinc (max. conc.)	1800.0 µg/l	172 µg/l
02/28/07	001A	TSS (mo. avg. load)	2487 lb/d	1217 lb/d
02/28/07	001A	TSS (mo. avg. conc.)	54.5 mg/L	20 mg/L
02/28/07	001A	TSS (7-day avg. conc.)	83.7 mg/L	30 mg/L
10/31/07	001A	DO (inst. min.)	5.3 mg/L	6.0 mg/L

<u>DATE</u>	<u>OUTFALL</u>	<u>PARAMETER</u>	<u>REPORTED</u>	<u>PERMITTED</u>
12/31/07	001A	TSS (mo. avg. load)	1551 lb/d	1217 lb/d
12/31/07	001A	TSS (mo. avg. conc.)	27.5 mg/L	20 mg/L
12/31/07	001A	TSS (7-day avg. conc.)	40.3 mg/L	30 mg/L
01/31/08	001A	TSS (7-day avg. conc.)	32.4 mg/L	30 mg/L
02/29/08	001A	TSS (mo. avg. load)	1664 lb/d	1217 lb/d
02/29/08	001A	TSS (mo. avg. conc.)	28.9 mg/L	20 mg/L
02/29/08	001A	TSS (7-day avg. conc.)	33.9 mg/L	30 mg/L
03/31/08	001A	DO (inst. min.)	4.5 mg/L	6.0 mg/L
03/31/08	001A	TSS (mo. avg. load)	5170 lb/d	1217 lb/d
03/31/08	001A	TSS (mo. avg. conc.)	57.3 mg/L	20 mg/L
03/31/08	001A	TSS (7-day avg. conc.)	64.5 mg/L	30 mg/L
03/31/08	001A	FCB (7-day geo mean)	5998 col/100 ml	2000 col/100 ml
03/31/08	001A	CBOD5 (mo. avg. load)	1364 lb/d	913 lb/d
03/31/08	001A	CBOD5 (mo. avg. conc.)	15.1 mg/L	15 mg/L
04/30/08	001A	DO (inst. min.)	5.2 mg/L	6.0 mg/L
04/30/08	001A	TSS (mo. avg. load)	1670 lb/d	1217 lb/d
04/30/08	001A	TSS (mo. avg. conc.)	23.4 mg/L	20 mg/L
04/30/08	001A	TSS (7-day avg. conc.)	46.9 mg/L	30 mg/L
04/30/08	001A	TRC (inst. max.)	0.48 mg/L	0.1 mg/L
05/31/08	001A	TSS (mo. avg. load)	1150 lb/d	913 lb/d
05/31/08	001A	TSS (mo. avg. conc.)	21.7 mg/L	15 mg/L
05/31/08	001A	TSS (7-day avg. conc.)	28.7 mg/L	23 mg/L
05/31/08	001A	TRC (inst. max.)	0.41 mg/L	0.1 mg/L
05/31/08	001A	Copper (mo. avg. load)	0.58 lb/d	0.56 lb/d
05/31/08	001A	Copper (mo. avg. conc.)	11 µg/l	9.24 µg/l
06/30/08	001A	TRC (inst. max.)	0.62 mg/L	0.1 mg/L
06/30/08	001A	Copper (mo. avg. load)	2 lb/d	0.56 lb/d
06/30/08	001A	Copper (mo. avg. conc.)	39 µg/l	9.24 µg/l
06/30/08	001A	Copper (7-day avg. conc.)	39 µg/l	18.54 µg/l
07/31/08	001A	TRC (inst. max.)	0.34 mg/L	0.1 mg/L
07/31/08	001A	NO ₃ -N (mo. avg. conc.)	10.2 mg/L	10 mg/L
07/31/08	001A	Copper (mo. avg. load)	1 lb/d	0.56 lb/d
07/31/08	001A	Copper (mo. avg. conc.)	14 µg/l	9.24 µg/l
08/31/08	001A	TRC (inst. max.)	0.3 mg/L	0.1 mg/L
08/31/08	001A	NO ₃ -N (mo. avg. conc.)	10.9 mg/L	10 mg/L
09/30/08	001A	TRC (inst. max.)	0.41 mg/L	0.1 mg/L
10/31/08	001A	TRC (inst. max.)	0.43 mg/L	0.1 mg/L
10/31/08	001A	NO ₃ -N (mo. avg. conc.)	12.6 mg/L	10 mg/L
11/30/08	001A	TRC (inst. max.)	.45 mg/L	.1 mg/L
11/30/08	001A	NO ₃ -N (mo. avg. load)	643 lb/d	609 lb/d
11/30/08	001A	NO ₃ -N (7-day avg. conc.)	16.4 mg/L	10 mg/L
11/30/08	001A	NO ₃ -N (mo. avg. conc.)	20 mg/L	15 mg/L
12/31/08	001A	TSS (mo. avg. conc.)	21.8 mg/L	20 mg/L

<u>DATE</u>	<u>OUTFALL</u>	<u>PARAMETER</u>	<u>REPORTED</u>	<u>PERMITTED</u>
12/31/08	001A	NO ₃ -N (mo. avg. load)	668 lb/d	609 lb/d
12/31/08	001A	NO ₃ -N (mo. avg. conc.)	14.6 mg/L	10mg/L
12/31/08	001A	NO ₃ -N (7-day avg. conc.)	21.6 mg/L	15 mg/L
12/31/08	001A	TRC (inst. max.)	.52 mg/L	.1 mg/L
01/31/09	001A	TSS (mo. avg. conc.)	24 mg/L	20 mg/L
01/31/09	001A	TSS (7-day avg. conc.)	42.2 mg/L	30 mg/L
01/31/09	001A	TRC (inst. max.)	.39 mg/L	.1 mg/L
01/31/09	001A	NO ₃ -N (mo. avg. conc.)	11.9 mg/L	10 mg/L
02/28/09	001A	TSS (mo. avg. load)	1470 lb/d	1217 lb/d
02/28/09	001A	TSS (mo. avg. conc.)	28.9 mg/L	20 mg/L
02/28/09	001A	TRC (inst. max.)	.47 mg/L	.1 mg/L
02/28/09	001A	NO ₃ -N (mo. avg. conc.)	10.3 mg/L	10 mg/L
03/31/09	001A	TSS (mo. avg. load)	1764 lb/d	1217 lb/d
03/31/09	001A	TSS (mo. avg. conc.)	28.7 mg/L	20 mg/L
03/31/09	001A	TSS (7-day avg. conc.)	35 mg/L	30 mg/L
03/31/09	001A	TRC (inst. max.)	.49 mg/L	.1 mg/L
04/30/09	001A	TSS (mo. avg. load)	3124 lb/d	1217 lb/d
04/30/09	001A	TSS (mo. avg. conc.)	49.1 mg/L	20 mg/L
04/30/09	001A	TSS (7-day avg. conc.)	68.4 mg/L	30 mg/L
04/30/09	001A	TRC (inst. max.)	.52 mg/L	.1 mg/L
04/30/09	001A	Zinc (mo. avg. load)	6 lb/d	5.2 lb/d
04/30/09	001A	Zinc (mo. avg. conc.)	118.3 µg/l	86 µg/l
04/30/09	001A	Zinc (max. conc.)	190 µg/l	172 µg/l
04/30/09	001A	Copper (7-day avg. conc.)	71µg/l	18.54 µg/l
04/30/09	001A	Copper (mo. avg. load)	2 lb/d	.56 lb/d
04/30/09	001A	Copper (mo. avg. conc.)	37 µg/l	9.24 µg/l
05/31/09	001A	TSS (mo. avg. load)	2829 lb/d	913 lb/d
05/31/09	001A	TSS (mo. avg. conc.)	36.7 mg/L	15 mg/L
05/31/09	001A	TSS (7-day avg. conc.)	110.7 mg/L	23 mg/L
05/31/09	001A	TRC (inst. max.)	.5 mg/L	.1 mg/L
06/30/09	001A	TRC (inst. max.)	.4 mg/L	.1 mg/L
07/31/09	001A	Copper (mo. avg. load)	.59 lb/d	.56 lb/d
07/31/09	001A	Copper (mo. avg. conc.)	14.1 µg/l	9.24 µg/l
07/31/09	001A	TRC (inst. max.)	.34 mg/L	.1 mg/L
07/31/09	001A	NO ₃ -N (mo. avg. conc.)	12.1 mg/L	10 mg/L

3. The Permittee failed to submit noncompliance reports with its DMRs for January, July, August, September, and October of 2008 on or before the 25th day of the month following the monitoring period, in violation of Part II, Section D, Paragraph 7 of the Permit and Ark. Code Ann. §§8-4-216(a) and 8-4-217(a)(3).

4. On May 21, 2007, ADEQ and the U.S.E.P.A. conducted a joint routine compliance inspection of the Permittee's POTW in accordance with the provisions of the Federal Clean Water Act, the Arkansas Water and Air Pollution Control Act, and the regulations promulgated thereunder.

A. The inspection revealed the following violations:

- i) The totalizing meter at Outfall 001 was not reading within $\pm 10\%$ of the true discharge rate, in violation of Part II, Section C, Paragraph 2 of the Permit and Ark. Code Ann. §8-4-217(a)(3).
- ii) The Permittee was not conducting monitoring according to test procedures approved under 40 CFR 136, in violation of Part II, Section C, Paragraph 3 of the Permit and Ark. Code Ann. §8-4-217(a)(3), as follows:
 - (1) The facility's lab was not pre-distilling NH₃ samples prior to analysis.
 - (2) Reviewed bench sheets showed that BOD samples were dechlorinated but there was no verification that the dechlorination was complete.

B. In a letter dated June 28, 2007, the Permittee adequately responded to the findings of ADEQ's and the U.S.E.P.A.'s May 21, 2007 inspection.

5. The Permittee has significant problems in its sanitary sewer collection system with inflow and/or infiltration (I/I) that cause sanitary sewer overflows (SSOs) and peak flows well over 200% of the treatment plant's design flow of 7.3 million gallons per day (mgd). A review of the file reveals peak flows as high as 19.8 mgd in January 2007, 17.25 mgd in March 2008, and 18.88 mgd in May 2009. These high flows have contributed in large part to the SSOs the Permittee has experienced since April 2006. The Permittee has reported these SSOs to the Department, as required by the Permit. SSOs violate Ark. Code Ann. § 8-4-217(a)(2), which

makes it unlawful to "place or cause to be placed any sewage . . . or other wastes in a location where it is likely to cause pollution of any waters of this state." ADEQ acknowledges the State of Arkansas has experienced two abnormally wet years. A list of the SSOs is attached to this CAO and by this reference incorporated herein.

6. The Permittee and ADEQ entered into CAO LIS 06-114, effective September 10, 2006.

A. That CAO addressed the Permittee's significant problems with VI and SSOs.

i) The CAO allowed the Permittee, until the corrective actions addressing SSOs were completed or July 31, 2009, whichever came first, to bypass, under certain conditions, its secondary treatment process with any wastewater that exceeds 6.5 mgd.

ii) As required by the CAO, the Permittee submitted a comprehensive plan for eliminating SSOs.

iii) Given the SSOs and continued high peak flows referred to in Paragraph 5 above, it is apparent the comprehensive plan described in Paragraph 6A(ii) above has not adequately addressed the Permittee's problems with VI.

B. CAO LIS 06-114 also addressed violations of the Permit, including, in part, forty-three effluent characteristics violations.

i) As required by the CAO, the Permittee submitted a comprehensive plan for achieving compliance with the Permit and eliminating effluent characteristics violations.

ii) Given the numerous effluent characteristics violations listed in Paragraph 2 above, it is apparent the comprehensive plan described in Paragraph 6B(i) above has not adequately addressed the wastewater treatment problems.

7. Part I, Section A of the Permit includes, in part, interim effluent limits for Nitrates (NO₃-N), effective, April 1, 2005 through March 31, 2008, that require the Permittee to monitor and report only. It also includes final limits, effective April 1, 2008 through March 31, 2010 as follows:

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>		
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/L, unless otherwise specified)	
		Monthly Avg.	Monthly Avg.
Nitrates (NO ₃ -N)	609	10	15
Total Residual Chlorine (TRC)	N/A	0.1 (Inst. Max)	

8. The Permittee has failed to meet the Permit's final effluent limits for NO₃-N and TRC by April 1, 2008 as required by Part I, Section B of the Permit. The Permittee had planned and continues to plan to address these limits by permitting an outfall to the Arkansas River. The Permittee withdrew its permit to develop additional supporting information.

9. The Permittee has taken the following measures and actions to address the violations alleged by ADEQ:

- A. Replaced two hundred fifty-two (252) customer owned and maintained cleanout caps;
- B. Rehabilitated two hundred forty-four (244) manholes;
- C. Rehabilitated the Permittee's primary pump station, Prairie Creek, at a cost of \$560,199;
- D. Rehabilitated the 10th Street Sewer Basin utilizing pipe bursting/slip lining techniques at a cost of \$299,237;
- E. Completed construction of a thirteen million gallon equalization basin at the POTW at a cost of \$4,188,000;
- F. Installed a chemical feed system at the activated sludge process with includes dissolved oxygen (DO), pH, and total suspended solids (TSS) meters at the equalization basins and final clarifiers;

G. Installed flow metering for the return activated sludge and waste sludge system with will help the Permittee to better control the operation of the activated sludge system process at a cost of \$963,453;

H. Replaced the headwork's screening at a cost of \$275,262;

I. Established a collection system I/I abatement field crew working full time in smoke testing and dye testing to identify leaking sewer mains and stormwater cross connections to the sanitary sewer system which enable the crew to repair leaking lines and stormwater cross connections as they are identified; and

J. Successfully petitioned the Russellville City Council to increase the sewer usage charges to provide sufficient system operation and maintenance funds, as well as to provide approximately \$1,000,000 annually for system improvements, repair, and replacements.

10. Without admitting or denying these Findings of Fact, the Permittee agrees to the following Order and Agreement in full settlement and compromise of the alleged violations as stated herein.

ORDER AND AGREEMENT

Therefore, the parties do hereby stipulate and agree that:

1. Within **thirty (30) days** of the effective date of this CAO, the Permittee shall submit for ADEQ approval a comprehensive Corrective Action Report ("CAR") which shall detail the steps the Permittee has taken to achieve full compliance with the terms of the Permit, to eliminate the violations cited in the Findings of Fact, and to prevent future violations.

2. If the Permittee determines that full compliance with the terms of the Permit and correction of the violations cited above in the Findings of Fact cannot be achieved within **thirty (30) days** of the effective date of this CAO, the Permittee shall submit for ADEQ approval a

comprehensive Corrective Action Plan ("CAP") with a milestone schedule in lieu of the CAR required by Paragraph 1 above. The CAP shall detail the steps the Permittee shall take to achieve such full compliance, to correct the violations, and to prevent future violations. Upon approval by ADEQ, the CAP and milestone schedule shall be incorporated into this CAO by reference and shall be followed by the Permittee. Failure to comply with the schedule as approved by ADEQ shall be subject to the stipulated penalties contained in Paragraph 14 below.

3. Within **ten (10) days** of the effective date of this CAO, the Permittee through the services of an engineer licensed in the State of Arkansas shall develop and submit for ADEQ approval a CAP with a milestone schedule which shall detail the steps the Permittee shall take to expeditiously achieve full compliance with the Permit's effluent limits for Total Suspended Solids (TSS) and Total Chlorine Residual (TRC) and to prevent future TSS and TRC violations ("**CAP for TSS and TRC**"). Upon approval by ADEQ, the CAP, including milestone schedule shall be incorporated into this CAO by reference and shall be followed by the Permittee. Failure to comply with the schedule as approved by ADEQ shall be subject to the stipulated penalties contained in Paragraph 14 below.

4. Within **eighteen (18) months** of the effective date of this CAO, with the overall goal of eliminating noncapacity and capacity related SSOs and bypasses, the Permittee through the services of an engineer licensed in the State of Arkansas shall develop and submit for ADEQ approval a Sewer System Evaluation Study ("**SSES**") for its sanitary sewer collection system.

A. At minimum, the SSES shall:

- i) Estimate peak flows (including escaped SSO volumes);
- ii) Estimate the capacity of critical system components;

iii) Identify hydraulic deficiencies, including components of the system with limiting capacity;

iv) Establish short and long term capacity enhancements to address each hydraulic deficiency;

v) Evaluate alternatives for corrective action; and

vi) Prioritize corrective action.

B. The SSES shall include an **SSO Plan** with a milestone schedule which shall detail the steps the Permittee shall take to fully and expeditiously implement the corrective action.

i) The SSO Plan shall include a **deadline** for the Permittee's achieving **compliance** with the proper maintenance and operation of the wastewater collection system as it applies to noncapacity related SSOs and bypasses (**dry weather overflows**).

ii) The SSO Plan shall include a **deadline** for the Permittee's achieving **compliance** with the proper maintenance and operation of the wastewater collection system as it applies to capacity related SSOs and bypasses (**wet weather overflows**).

C. Upon approval by ADEQ, the SSES with SSO Plan and milestone schedule shall be incorporated into this CAO by reference and shall be followed by the Permittee.

Failure to comply with the schedule as approved by ADEQ shall be subject to the stipulated penalties contained in Paragraph 14 below.

5. Within **thirty (30) days** of the effective date of this CAO, the Permittee shall identify all pumping stations that do not have **direct notification alarms and auxiliary power** and submit for ADEQ approval a milestone schedule for installing them. Upon approval by ADEQ, the milestone schedule shall be incorporated into this CAO by reference and shall be followed by the

Permittee. Failure to comply with the schedule as approved by ADEQ shall be subject to the stipulated penalties contained in Paragraph 14 below.

6. Within **sixty (60) days** of the effective date of this CAO, the Permittee shall establish, implement, and submit for ADEQ approval an **Overflow Response Plan** for the treatment works which shall:

A. Identify the individual(s) responsible for making the appropriate reports (24-hour notification and monthly tabular reports) to ADEQ;

B. Ensure that collection system overflows are identified and responded to in a timely manner;

C. Establish written procedures for cleaning up after SSOs;

D. Have provisions to notify the affected public of SSOs in parks and other public areas where access is not restricted and a reasonable potential exists for exposure to bacteria and other disease causing agents; and

E. Have provisions to notify any affected permit holders including municipal separate stormwater sewer permit (MS4) holders.

7. Within **one (1) year** of the effective date of this CAO the Permittee shall establish and maintain a **minimum inventory of spare parts** necessary to make immediate repairs to the pump stations, wastewater lines, and manholes for the POTW. The Permittee will submit this inventory list to ADEQ upon completion of the inventory.

8. Within **ninety (90) days** of the effective date of this CAO, the Permittee shall employ the services of a professional engineer licensed in the State of Arkansas to develop a continuous Capacity, Management, Operation, and Maintenance Program ("**CMOM**") for its sanitary sewer collection system. The CMOM shall include the following elements:

- A. The CMOM shall enable the Permittee to:
- i) Properly manage, operate, and maintain, at all times, all parts of the collection system the Permittee owns or over which it retains operational control;
 - ii) Provide adequate capacity to convey base flows and peak flows for all parts of the collection system the Permittee owns or over which it retains operational control and take all feasible steps to stop and mitigate the impact of non-wet weather related sanitary sewer overflows in portions of the collection system owned by the Permittee or over which the Permittee retains operational control;
 - iii) Provide notification to parties with a reasonable potential for exposure to pollutants associated with an overflow event.
- B. The CMOM shall include a Statement of Major Goals consistent with Paragraph 8(A)(i-iii) above and a schedule for the implementation and achievement of the goals.
- C. The CMOM shall include documentation identifying the Permittee's authority to:
- i) Control private inflow sources;
 - ii) Require that sewers and connections be properly designed and constructed;
 - iii) Ensure proper installation, testing, and inspection of new and rehabilitated sewers (such collector sewers and service laterals);
 - iv) Address flows from satellite municipal collection systems; and
 - v) Implement the general and specific prohibitions of the national pretreatment program which the Permittee is subject to under 40 CFR § 403.5.
- D. The CMOM shall include a list which shall identify the management/administrative personnel responsible for implementing the CMOM program, including lines of authority by organizational chart or similar document. The list shall

also identify the individuals, or positions within its organization, responsible for the following elements:

- i) Lift station operation and maintenance;
- ii) Geographic Information System, a geo-based inventory of collection system assets and associated databases that supports system mapping and other utility operations;
- iii) Maintenance procedures that insure managers and supervisors are provided timely, relevant information from field personnel in order to establish and prioritize collections system activities (such as the elimination of dry weather overflows or overflows into sensitive waters based upon consideration of factors, including: public drinking water supplies and their source waters, swimming beaches and waters where swimming occurs, shellfish beds, designated Outstanding National Resource Waters, waters within federal, state or local parks, and water containing threatened or endangered species or their habitat);
- iv) Computerized Maintenance Management System, an asset information and work management software used to schedule and track all work performed on collection system, lift station, and wastewater treatment plant (WWTP) assets.
- v) Collection system preventive maintenance activities;
- vi) Assessment of the current capacity of the collection system and treatment facilities which the Permittee owns or over which it retains operational control;
- vii) Identification and prioritization of structural deficiencies and the short-term rehabilitation actions to address each deficiency;
- viii) Collection system employee training;

ix) Equipment and replacement parts inventories, including identification of critical replacements parts; and

x) Trap Control Program to abate the impact of fats, oil, and grease (FOG) on the collection system.

E. The CMOM shall establish requirements and standards for the installation of new sewers, pumps, and other appurtenances and rehabilitation and repair projects. The requirements and standards must include the specifications and procedures for testing the installation of new sewers, pumps, and other appurtenances, and for rehabilitation and repair projects.

F. The Permittee shall develop a written summary of the CMOM program. This summary shall be made available to any member of the public upon request.

G. The Permittee shall:

i) Submit to ADEQ on or before March 31st each year annual reports for the previous calendar year on the implementation of each element of its CMOM program and on measurement of the program's effectiveness.

ii) Update CMOM program elements based on monitoring or performance evaluations.

iii) Modify the summary of its CMOM program, as appropriate, to keep it updated and accurate.

9. Upon ADEQ's approval of the CAP for TSS and TRC described in Paragraph 3 of this Order and Agreement, and lasting until such time as the corrective actions required by that paragraph are completed or July 31, 2012, whichever comes first, the Permittee may **bypass** the

activated sludge treatment process with any wastewater that exceeds 6.5 million gallons a day (mgd) under the following conditions:

- A. The Permittee's flow equalization basin must be full and incapable of receiving any additional flows;
- B. The Permittee shall notify ADEQ of the bypass within 24-hours (one working day) of beginning the bypass and will notify ADEQ no later than 24-hours (one working day) after bypassing has ceased;
- C. The Permittee shall bypass only those waters that exceed 6.5 mgd. All other waters will be routed through the activated sludge treatment process;
- D. All wastewater shall be routed through the disinfection process before being discharged;
- E. The wastewater shall be sampled in accordance with the requirements of the Permit;
- F. The Permittee shall submit to ADEQ a written follow-up report no later than five days after each bypass has been stopped;
- G. The Permittee shall publish the five-day reports on the Permittee's website so that they are available for the public to review. These reports shall be published within one (1) week of submittal to the Department; and
- H. The Director at any time for any reason may withdraw permission to bypass the secondary process or change any of the above conditions upon written notice to the Permittee.

10. Until the date of the deadline(s) set for compliance with effluent limits in the approved CAPs required by Paragraphs 2 and 3 of the Order and Agreement, the following **interim limits**

shall remain in effect. All other limits and monitoring frequencies shall be as stated in the Permit.

Effluent Characteristics	Discharge Limitations		
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/L, unless otherwise specified)	
		Monthly Avg.	Monthly Avg.
Nitrates (NO3-N)	919.3	15.1	20.4
Total Residual Chlorine (TRC)	N/A	0.55 (Inst. Max)	

11. Upon the effective date of this CAO, CAO LIS 06-114 shall be closed and superseded by this CAO.

12. In compromise and full settlement of the civil penalties for the violations specified in the Findings of Fact, the Permittee agrees to pay to ADEQ the total sum of **Nine Thousand Three Hundred Dollars (\$9,300)** as a voluntary civil penalty. Payment of the penalty shall be made within **thirty (30) days** of the effective date of this CAO, made payable to the Arkansas

Department of Environmental Quality and mailed to the attention of:

The Fiscal Division
 Arkansas Department of Environmental Quality
 5301 Northshore Drive
 North Little Rock, Arkansas 72118

13. All submittals required by this CAO are subject to approval by ADEQ. In the event of any deficiency, the Permittee shall within fifteen (15) days of notification by ADEQ submit any additional information requested. Failure to adequately respond to the notice of deficiency within fifteen (15) days constitutes a failure to meet a deadline and is subject to the civil penalties contained in Paragraph 14 below.

14. Failure to meet the requirements, effluent limits, or construction deadlines of this CAO or the approved schedules provided for herein constitutes a violation of the CAO. If the Permittee

should fail to meet any such requirements, effluent limits or deadlines, the Permittee consents and agrees to pay, on demand, to ADEQ civil penalties according to the following schedule:

- | | |
|---------------------------------------------|------------------|
| (a) First day through the tenth day: | \$100.00 per day |
| (b) Eleventh day through the twentieth day: | \$200.00 per day |
| (c) Twenty-first day through thirtieth day: | \$300.00 per day |
| (d) Each day beyond the thirtieth day: | \$500.00 per day |

These stipulated penalties for delays in performance shall be in addition to any other remedies or sanctions which may be available to ADEQ by reason of the Permittee's failure to comply with the requirements of this CAO.

15. If any event, including but not limited to an act of nature, occurs which causes or may cause a delay in the achievement of compliance by the Permittee with the requirements or deadlines of this CAO, the Permittee shall so notify ADEQ, in writing, as soon as reasonably possible after it is apparent that a delay will result, but in no case after the due dates specified in the Permittee's milestone schedule. The notification shall describe in detail the anticipated length of the delay, the precise cause of the delay, the measures being taken and to be taken to minimize the delay, and the timetable by which those measures will be implemented.

16. ADEQ may grant an extension of any provision of this CAO, provided that the Permittee requests such an extension in writing and provided that the delay or anticipated delay has or will be caused by circumstances beyond the control of and without the fault of the Permittee. The time for performance may be extended for a reasonable period but in no event longer than the period of delay resulting from such circumstances. The burden of proving that any delay is caused by circumstances beyond the control of and without the fault of the Permittee and the length of the delay attributable to such circumstances shall rest with the Permittee. Failure to

notify ADEQ promptly, as provided in Paragraph 15 of this section, shall be grounds for a denial of an extension.

17. Nothing in this CAO shall constitute an admission of law or fact, nor evidence of any violation of law or regulations.

18. This CAO constitutes the entire agreement of the parties. All claims and disputes asserted by the parties hereto or capable of assertion in connection with the inspections, alleged violations, or the facts and circumstances related thereto shall be deemed merged into the terms and requirements of this CAO.

19. This CAO is subject to public review and comment in accordance with Ark. Code Ann. §8-4-103(d) and Arkansas Pollution Control and Ecology Commission Regulation No. 8 and shall not be effective until thirty (30) days after public notice is given. ADEQ retains the right to rescind this CAO based upon the comments received within the thirty-day public comment period. Notwithstanding the public notice requirements, the corrective actions necessary to achieve compliance with the terms of the Permit shall be taken immediately.

20. As provided by APC&EC Regulation No. 8, this matter is subject to being reopened upon Commission initiative or in the event a petition to set aside this CAO is granted by the Commission.

21. Nothing in this CAO shall be construed as a waiver by ADEQ of its enforcement authority over alleged violations not specifically addressed herein. Also, this CAO does not exonerate the

Permittee from any past, present, or future conduct which is not expressly addressed herein, nor does it relieve the Permittee of its responsibilities for obtaining any necessary permits.

SO ORDERED THIS 6th DAY OF Nov., 2009.

Teresa Marks
Teresa Marks, Director

APPROVED AS TO FORM AND CONTENT:

Russellville City Corporation

BY: [Signature]
(Signature)

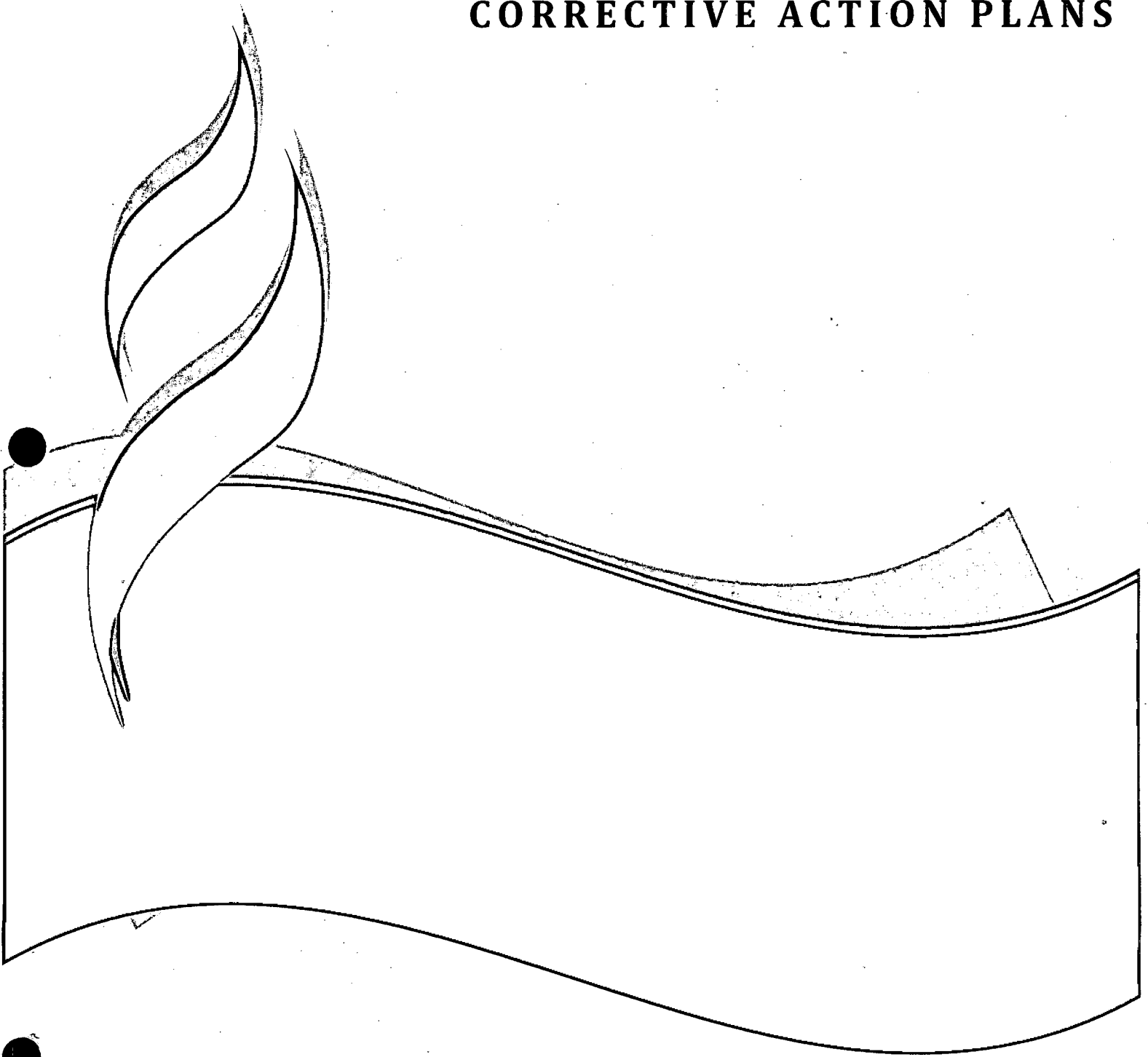
CRAIG NOBLE
(Typed or printed name)

TITLE: GENERAL MANAGER
(Typed or printed title)

DATE: November 3, 2009

APPENENDIX B

CORRECTIVE ACTION PLANS



CITY CORPORATION
RUSSELLVILLE, ARKANSAS

CITY CORPORATION WASTEWATER TREATMENT PLANT

CAO LIS No. 09-146 AFIN 58-00105

NPDES Permit No. AR0021768

CORRECTIVE ACTION PLAN for TSS & TRC VIOLATIONS

Prepared for: The Arkansas Department of Environmental Quality

December 23, 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 the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

CRAIG NOBLE, General Manager

CITY CORPORATION

I. General

This Corrective Action Plan (CAP) has been prepared by Garver LLC on behalf of City Corporation, Russellville, AR, in order to address the planned solutions for the Russellville City Corporation Pollution Control Works (PCW) Total Suspended Solids (TSS) and Total Residual Chlorine (TRC) violations. This CAP is required per the Consent Administrative Order (CAO) No. 09-146 AFIN 58-00105. TSS and TRC violations have occurred at the PCW over the past few years. This CAP outlines the proposed improvements to address these violations and proposes an implementation schedule for the said improvements.

II. Proposed Improvements

A. Plant Polishing Step

The proposed improvements involve the installation of a plant polishing treatment unit within the existing PCW process train. A disc-filter system is proposed for evaluation to provide solids removal to a final effluent average concentration of ≤ 15 mg/L TSS. The polishing step would be installed at the end of the process train, just prior to chlorination. A hydraulic profile is included in Appendix A, which shows the intended location of the disc-filter units within the process train. The proposed use of the disc-filter system as a plant polishing step may be modified depending upon the pilot plant data. It may be that the unit would serve more effectively as a wet weather by-pass treatment unit and be used to only treat flows above 6.5 mgd that by-pass the activated sludge treatment step. However, preliminary cost figures indicate that the filter equipment necessary to polish the total plant flow is only slightly more expensive than equipment sized to treat only the flow which by-passes the activated sludge system. Filtering of total plant flow versus filtering of only the flow by-passing the activated sludge facilities will be evaluated during the piloting of the proposed filters (discussed below) and during the final design effort.

B. Kruger Hydrotech Disc-filters

The proposed disc-filter equipment is equal to that manufactured by Kruger Hydrotech a division of Veolia Water. The system is composed of three (3) units of model HSF2220-1F to treat a peak flow of 20 mgd and an average flow of 5.7 mgd. The aforementioned effluent concentration of 15 mg/L TSS, or less, is targeted with this design. The units are equipped with automatic backwash and maintain continuous filtration even during a backwash cycle. The units will be furnished with woven polyester disc-filter media with a pore size of 10 μ m. The

peak hydraulic loading will remain below 6 gpm/sf, for expected peak flows up to 20 mgd.

C. Pilot Testing

In order to validate and refine the proposed design, a pilot testing study of the proposed equipment is needed. The study results will be used to validate the intended design and refine the equipment parameters, such as filter pore size, design loading rates, potential need for additional coagulation/filtration step, etc..

D. Total Residual Chlorine

Control of the chlorine dosage required to properly disinfect the PCW effluent and thus meet NPDES FCB limits is counterproductive to being able to meet a <0.1 mg/l total residual chlorine limit in the plant effluent. Typically when chlorine is used for disinfection, dechlorination is required to meet the TRC limit. In the past it was anticipated that once the discharge point was moved to the Arkansas River, the PCW effluent would be dechlorinated naturally during the flow time in the outfall, therefore, no dechlorination facilities have been constructed to date. In order to meet the permitted limit of 0.1 mg/L, the installation of a sulfur dioxide feeder is now planned for dechlorination. Gaseous sulfur dioxide will be fed and mixed at the plant effluent prior to the effluent entering the outfall pipe. ADEQ has provided an interim limit in the CAO for TRC of <0.55 mg/l until such time as the dechlorination facilities can be completed. City Corporation believes that it will be able to comply with such an interim limit. The proposed dechlorination facility construction will be a part of the contract for installing the proposed disc-filters as outlined above.

III. Implementation Schedule

Milestone	Time (Days)	Cumulative Time (Days)	Date
CAO Effective Date	0	0	12/25/09
Submittal of CAP for TSS & TRC	10	10	1/04/10
Approval of CAP for TSS & TRC	30	40	2/03/10
Execution of Disc-Filter Pilot Agreement	30	70	3/05/10
Receive Pilot Equipment at PCW	60	130	5/04/10
Install Pilot Equipment and Complete Tests **	30	160	6/03/10
Prepare Construction Plans & Specifications	120	280	10/01/10
Regulatory Agency Review	30	310	11/01/10

Advertise, Bid, & Award Contract	60	370	1/02/11
Complete Construction	270	640	10/03/11
Place Units in Service			10/03/11
Attain TSS & TRC Compliance		not later than 7/31/12	

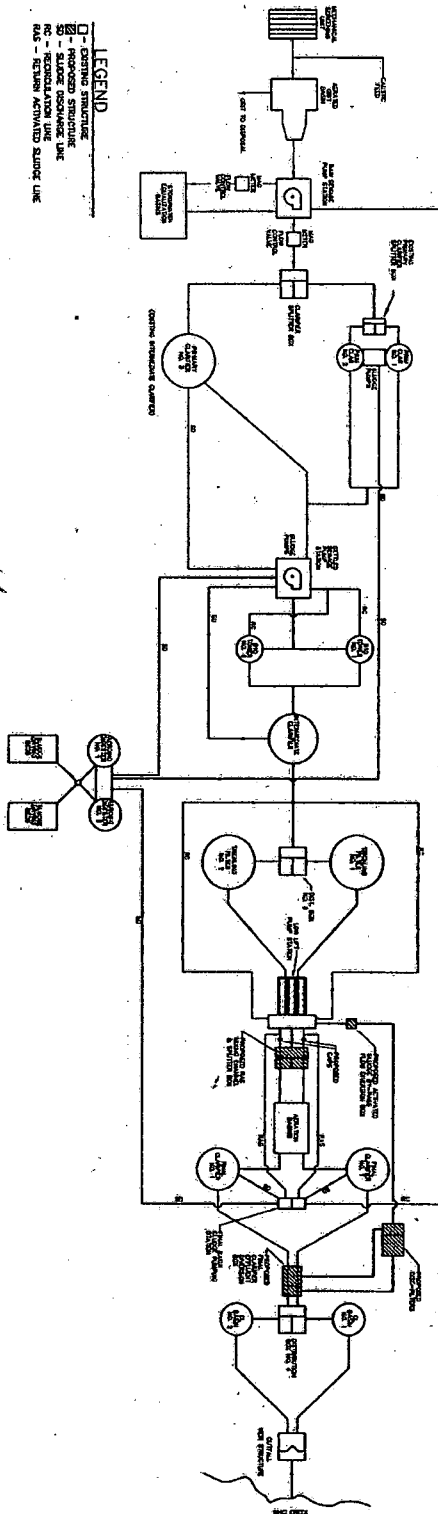
** In the event that the pilot test proves the filters to be ineffective, owner will research other treatment technologies and submit to ADEQ for a revision in this schedule.

The implementation schedule above assumes an effective date for the CAO of December 25, 2009 and is based on reasonable estimates of the time involved for each stage. A large portion of the construction phase will involve the shop drawing review and equipment delivery stages. A conservative estimate for the time involved in the shop drawing/equipment delivery period of the construction phase is 28 weeks (7 months).

IV. Conclusion

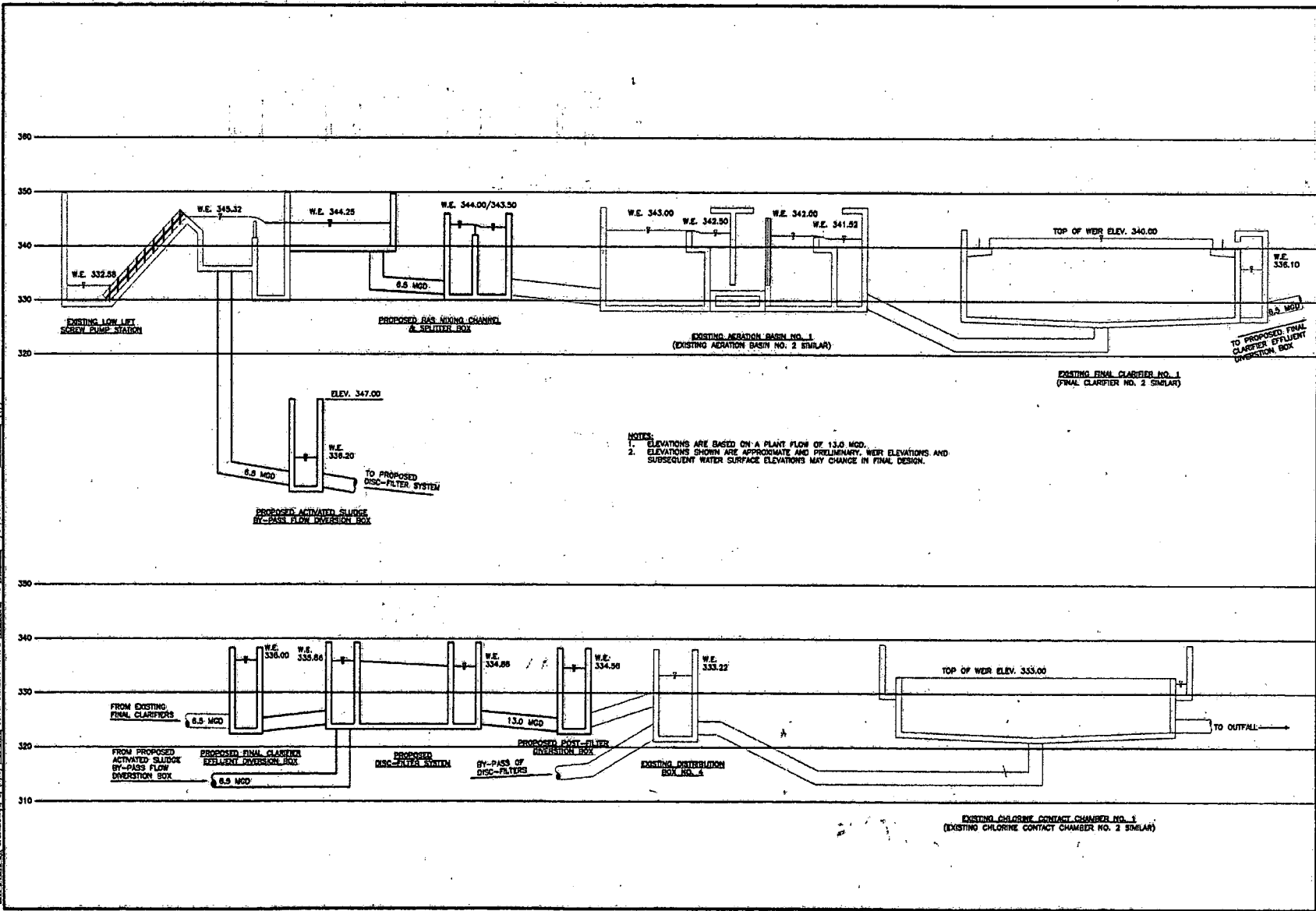
The use of disc-filters as a plant polishing process step is a commonly used solution for treating TSS problems, and, given the success of similar installations, we feel that this would be an appropriate solution to the Russellville PCW TSS problems. The pilot plant study will help to verify these assumptions and provide data necessary to fine tune the disc-filter units for the specific Russellville PCW wastewater characteristics. The project will include the installation of dechlorination facilities utilizing sulfur dioxide, in order to address the TRC violations. The proposed 18 month period between the completion of pilot testing and the completion of construction may be able to be improved upon depending on the lead time of equipment. However, we feel that the milestone schedule above is a good estimate of the time involved for the successful completion of the project.

APPENDIX A



LEGEND
 - - - - - EXISTING STRUCTURE
 - - - - - PROPOSED STRUCTURE
 - - - - - SLUDGE STORAGE TANK
 - - - - - RETURN ACTIVATED SLUDGE LINE

SHEET NUMBER A1	DRAWING NUMBER A1	JOB NO.: 09018320 DATE: DEC. 2009 DESIGNED BY: CMG DRAWN BY: CMG	PRELIMINARY PROCESS FLOW DIAGRAM	CITY CORPORATION RUSSELLVILLE, ARKANSAS CORRECTIVE ACTION PLAN FOR TSS COMPLIANCE	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REV.	DATE	DESCRIPTION	BY													
REV.	DATE	DESCRIPTION	BY																			



NOTES:
 1. ELEVATIONS ARE BASED ON A PLANT FLOW OF 13.0 MGD.
 2. ELEVATIONS SHOWN ARE APPROPRIATE AND PRELIMINARY. WEIR ELEVATIONS AND SUBSEQUENT WATER SURFACE ELEVATIONS MAY CHANGE IN FINAL DESIGN.

DATE: 11/19/2009 11:24 AM
 USER: C:\Users\cckg\Documents\Projects\1174\1174.dwg
 PLOT: 11/19/2009 11:24 AM
 PLOTTER: HP DesignJet 2450

NO.	DATE	DESCRIPTION

CITY CORPORATION
 RUSSELLVILLE, ARKANSAS
 CORRECTIVE ACTION PLAN
 FOR TSS COMPLIANCE

PRELIMINARY
 HYDRAULIC
 PROFILE

JOB NO.: 09018320
 DATE: DEC., 2009
 DESIGNED BY: CKG
 DRAWN BY: CKG

SCALE: AS SHOWN OR
 OTHERWISE INDICATED
 1" = 10' HORIZONTAL
 1" = 4' VERTICAL
 UNLESS OTHERWISE SPECIFIED

DRAWING NUMBER
A2
 SHEET
 NUMBER

CITY CORPORATION
RUSSELLVILLE, ARKANSAS

CITY CORPORATION WASTEWATER TREATMENT PLANT

CAO LIS No. 09-146

AFIN 58-00105

NPDES Permit No. AR0021768

COMPREHENSIVE CORRECTIVE ACTION PLAN

Prepared for: The Arkansas Department of Environmental Quality
21 January 2010

Revision 1 – Incorporating ADEQ Comments
9 April 2010

Revision 2 – Incorporating Additional ADEQ Comments
17 May 2010

Revision 3 - Table Revised
28 May 2010

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

CRAIG NOBLE, General Manager
CITY CORPORATION

1. General

This Comprehensive Corrective Action Plan (CAP) is intended to address paragraph Two (2.) of the Order and Agreement section of the Consent Administrative Order LIS No. 09-146.

2. City Corporation Wastewater Plant Inspection Deficiencies noted by ADEQ

As noted in the Findings of Fact within the CAO, City Corporation took actions to correct the deficiencies identified in the May 21, 2007, ADEQ and U.S.E.P.A. inspection. City Corporation adequately responded to the findings of that inspection with a letter to ADEQ dated June 28, 2007.

3. NPDES Permit Violations

3.1. Nature of Violations: One hundred and two (102) NPDES Permit violations are noted in the CAO beginning on 04/30/06 through 07/31/09. These violations include the following:

- o Eight (8) CBOD₅.
- o Forty two (42) TSS.
- o One (1) Fecal Coliform Bacteria.
- o Four (4) Dissolved Oxygen
- o One (1) pH
- o Sixteen (16) Total Residual Chlorine
- o Twelve (12) Copper
- o Six (6) Zinc, and
- o Twelve (12) NO₃-N

3.2. Causes and Corrective Actions:

3.2.1. TSS and CBOD₅ Violations – The CBOD₅ and TSS violations are the direct result of surge flows into the City Corporation Pollution Control Works (PCW) during and following rainfall events. These surges are due to infiltration/inflow of storm waters into the City Corporation sanitary sewage collection system. In a previous corrective action plan City Corporation reported to ADEQ that it had an additional equalization basin under construction which will increase its ability to store in excess of 12 million gallons more of peak wet weather flows. It was hoped (and

expected) that would bring the total storage capacity available at the PCW to a level that would make wet weather surge flows manageable. That basin construction has been completed and the over \$4 Million unit has been in service for some time. Even with a total storage of peak wet weather flows of approximately 20 million gallons available at the PCW, there continues to be storm events which overwhelm the storage available and cause the PCW flows to surge above acceptable levels.

In a separate Corrective Action Plan submitted to ADEQ for approval, City Corporation outlined a plan to evaluate treatment technology which, when proven during a pilot study, will be installed to provide final filtration of the PCW effluent in order to bring the facility into compliance with its NPDES TSS limits. City Corporation has begun that effort as outlined.

It should be noted that each of the CBOD₅ violations noted in the CAO occurred during a month of excessive TSS discharge. That would seem to indicate that the CBOD₅ violations are due to particulate CBOD₅ rather than dissolved CBOD₅. Therefore it is anticipated that the final effluent filtration discussed above for TSS removal will also correct the CBOD₅ violations.

3.2.2. Fecal Coliform Bacteria and Dissolved Oxygen – These five (5) violations occurred during times of excessive TSS discharge. With the increased strength of discharge during these times the DO was consumed and the solids provided a shielding effect that caused the fecal coliform bacteria violations. With the implementation of new treatment technologies for TSS treatment as outlined above City Corporation believes the PCW will be in material compliance with permit limits for fecal coliform and dissolved oxygen.

3.2.3. pH – The pH violation noted in the CAO is one of failure to report. This occurred by oversight, and is not anticipated to happen again. However, pH control at the PCW is of concern in that the pH tends to be depressed beyond acceptable levels from time to time. This occurs generally when the plant is operating in a heavy nitrifying condition converting ammonia nitrogen to nitrates. This biological activity utilizes alkalinity in the incoming wastewater, thus depressing the pH. The Plant Staff has been accustomed to feeding lime by hand during such plant conditions to avoid effluent pH problems. City Corporation has recently completed construction of a bulk storage tank and automatic feeding equipment for lime at a cost of approximately \$800,000.00. The lime is fed at the influent to the activated sludge facilities where the nitrification is taking place. The control of the lime feed is automated to maintain pH levels in the activated sludge aeration basins. This system will help insure that plant effluent pH excursions do not happen.

3.2.4. TRC – Control of the chlorine dosage required to properly disinfect the PCW effluent and thus meet NPDES FCB limits is counterproductive to being able to meet a <0.1 mg/l total residual chlorine limit in the plant effluent. Typically when chlorine is used for disinfection, dechlorination is required to meet the TRC limit. ADEQ has provided an interim limit in the CAO for TRC of <0.55 mg/l. City

Corporation believes that it will be able to comply with such an interim limit. However, as mentioned in 3.2.1 above, City Corporation is evaluating, with the intent to construct, final effluent polishing for TSS and CBOD₅ control. As an insurance measure, City Corporation intends to include dechlorination facilities as outlined in the TSS/TRC CAP as submitted to ADEQ.

3.2.5. Copper and Zinc –

City Corporation is making a concerted effort at copper and zinc control. The PCW does not contain any treatment processes designed for copper or zinc removal. City Corporation has performed significant testing within its potable water treatment and distribution system. Based on those test results, City Corporation has concluded that the copper and zinc are entering the wastewater flow from leaching action in the water distribution system. The tests indicate these metals are coming from the residential customers of City Corporation, not commercial or industrial customers. The City Corporation raw and finished water to and from its water treatment plant have very low alkalinity. Low alkalinity waters are quite aggressive at low pH. As such, City Corporation has already implemented steps at its Water Treatment Plant to raise the finished water pH to make the water less corrosive. This adjustment will be monitored and evaluated as to effectiveness over time. It may be that further changes will be required in the chemical feed practices at the Water Plant such as further adjustment of the finished water target pH, feeding chemical(s) to increase finished water alkalinity, and/or changing types and/or increasing the feed rate of sequestering agents to prevent leaching of these metals from the pipe system. City Corporation will make such adjustments as may be required, and monitor the results as to effectiveness.

3.2.6. Nitrate (NO₃-N) – ADEQ has provided interim limits of 919.3 lb/day, 15.1 mg/l, and 20.4 mg/l (mass, monthly average, and 7-day average, respectively). Based on these interim limits, the twelve (12) NO₃-N violations noted in the CAO would be reduced to two (2) – one (1) 30 day average violation at 16.4 mg/l versus 15.1 mg/l interim limit and one (1) 7-day average at 21.6 mg/l versus 20.4 mg/l interim limit. City Corporation believes the PCW will be in material compliance with the interim limits.

City Corporation will evaluate our existing treatment processes to enhance ammonia and nitrate removal with alternative operational procedures which may result in a reduction of the nitrate nitrogen in the plant effluent. Operational modifications intended for evaluation include, but are not limited to, reduction in air flow delivered to the activated sludge aeration basins by cycling blowers and/or venting portions of the blower discharge periodically; operation of the effluent end of the aeration basins as an anoxic zone; and varying recycle rates around fixed film reactors.

City Corporation will submit an operations modification evaluation program to ADEQ for review and approval by September 1, 2010. City Corporation will

immediately proceed with easily implementable operational changes deemed to have potential of impacting ammonia and nitrate removal. The implementation and testing of potential solutions will proceed from the present through not later than December 31, 2012, to allow evaluation of the effectiveness of the modifications through seasonal changes in wastewater characteristics. If the testing indicates there are no effective means available within the current plant facilities to comply with these parameters, City Corporation will begin by December 31, 2012, the design, bidding, and construction of facilities that will bring their discharge into compliance not later than January 10, 2016. City Corporation will provide ADEQ quarterly progress reports beginning January 10, 2011, as this work proceeds.

4. SSES

As discussed above and in the CAO, City Corporation has made considerable effort and expended significant funds in constructing facilities to manage peak wet weather flows from its collection system. Also as noted, there continue to be instances of NPDES permit violations and overflow from the collection system directly attributable to extreme rainfall events. All overflows will be addressed according to the overflow response plan submitted to ADEQ. As with any wastewater system, the collection system cannot be economically designed to carry all rainfall events. City Corporation will implement a two-year storm event as the basis for hydraulic design in the system. As a result, City Corporation will design all sewer improvements to handle a minimum of a two-year event. Therefore, City Corporation shall evaluate, monitor, and address all overflows resulting from a rainfall event equal to a two-year storm or less. Any overflows occurring as a result of rainfall greater than the two-year storm will be monitored, cleaned, and reported according to City Corporation's Overflow Response Plan, but no corrective action will be necessary.

City Corporation intends to proceed with the corrective actions described in the paragraphs below.

4.1. Sanitary Sewer Evaluation Survey (SSES) - Phase I – City Corporation will solicit statements of qualifications, select and enter into a contract with an Engineer licensed in the State of Arkansas to develop and submit for ADEQ approval a System Evaluation and Capacity Assurance Plan (SECAP). The statement of qualifications will be received by City Corporation within 30 days of the approval of this Corrective Action Plan by ADEQ. City Corporation will select an Engineer, execute an agreement for services, and issue the notice to proceed to the Engineer within 30 days of the Engineer's selection. The SECAP will as a minimum include:

4.1.1. The Engineer will obtain City Corporation records on its sewage collection system and will identify drainage sub-basins. (Note –This work is already completed and 27 sub-basins were identified).

4.1.2. Flow monitoring equipment will be installed in each system sub-basin in order to measure and record wet weather and dry weather flows. Using this information, the

Engineer will identify and rank from maximum to minimum each sub-basin's contribution of infiltration and inflow (I/I) to the system. From this ranking, the Engineer will prioritize the sub-basins with excessive I/I. (Note – The flow meters have been installed in 27 distinct sub-basins.)

4.1.3. Concurrent with the flow monitoring, the Engineer will update the system maps for all lines 10-inch in diameter and larger. All manholes on these lines will be GPS surveyed to ensure accuracy and each manhole will be inspected for signs of I/I and structural soundness. As a result of the survey information, a hydraulic model network will be developed for all 10-inch in diameter and larger lines, selected 8-inch diameter lines, and all major pump stations. The model will be used along with the flow monitoring data to identify collection system capacity issues.

4.1.4. As part of the SSES – Phase I, the Engineer will review operating data for each of City Corporation's pump stations to determine normal operating conditions and pumping records following rainfall events, estimate peak flows (including escaped SSO volumes, if any), estimate the capacity of critical system components, identify hydraulic deficiencies (if possible) including components of the system with limiting capacity, evaluate preliminary short and long term capacity enhancements to address each hydraulic deficiency identified, make preliminary evaluation of alternatives for corrective action, and prioritize corrective action.

4.1.5. Based on information collected and analyzed in the SSES – Phase I, the Engineer will prepare recommendations for capacity improvements in the system, necessary improvements to the collection system lift stations, and a milestone schedule for the completion of a Sanitary Sewer Evaluation Survey (SSES) – Phase II. City Corporation will require that the Engineer complete the SSES – Phase I portion of the work within the timeframe identified in the Table of Major Actions and Events found at the conclusion of this document. The submittal of the Phase I report by the 18 month deadline will satisfy the requirements for completion of an SSES by City Corporation in regards to the Consent Administrative Order (CAO LIS No. 09-146). As a result of the Phase I report, an SSO Plan with milestone schedule will be developed for all SSES Phase II activities. The remedial action and construction measures resulting from these activities will be included in the milestone schedule.

4.1.6. City Corporation will submit to ADEQ the following items at the completion of Phase I:

4.1.6.1. SECAP report detailing necessary capacity improvements, prioritizing sub-basins by I/I contribution, and recommended improvements to the collection system lift stations

4.1.6.2. Milestone Schedule for the completion of SSES Phase II portion of the Corrective Action Plan (CAP) and estimated schedule for the construction of the recommended corrective actions.

4.2. SSES – Phase II – The report produced from the SSES – Phase I will identify the priority basins in the collection system which contribute a significant amount of infiltration and inflow (I/I) to the system. These basins will be ranked and prioritized according to the amount of I/I contribution. A milestone schedule detailing the completion of the SSES – Phase II will be developed from the report. Upon approval by ADEQ, the SSES milestone schedule will be incorporated into the CAO by reference. The high priority basins resulting from the flow monitoring studies will be further examined in Phase II. The studies of the priority basins will involve extensive field investigation in an effort to quantify the results of the I/I Analysis and flow monitoring. The following field activities will be part of the Phase II investigations: manhole inspections, additional flow monitoring, smoke testing, dyed water flooding, cleaning, and television inspection. Phase II will be a multi-year effort of extensive field investigation and the length of this portion of the plan will be dependent on the results of the Phase I studies and the number of high priority basins identified.

A detailed report for each sub-basin studied will be developed by the engineer at the conclusion of the Phase II activities. The report for each sub-basin will include a capital improvement plan. The capital improvement plan will give a detailed description of cost effective improvements recommended for each sub-basin. This plan will identify rehabilitation needs and capacity improvements, and provide a staged priority schedule with associated budget costs. The sub-basin report will also include a narrative description of the hydraulic analysis and field investigations. As stated above, City Corporation would like to clarify that the SSES – Phase II will be a multi-year effort of intense field investigation dependent on the severity of the flow monitoring results in SSES – Phase I. The completion of the SSES – Phase II studies and reporting will be in accordance with the milestone schedule submitted to ADEQ for approval at the completion of Phase I.

4.3. Dry Weather Overflows - City Corporation is not aware of any “chronic” overflow areas in its wastewater collection system caused by capacity limitations in transporting dry weather flows. As with any system, City Corporation does experience dry weather overflows on occasion. Essentially all of the dry weather overflows have been caused by blockage in the lines from root intrusion or materials/objects inappropriately discharged into the sewer system. Correction of these type occurrences is reactive and City Corporation dispatches a crew immediately as required to clear the blockage. City Corporation has developed an Overflow Response Plan to direct and guide the utility in responding to overflow situations. City Corporation will continue to monitor the collection system and react in a timely manner to all dry weather overflows. Additionally, City Corporation is currently developing a Capacity, Management, Operation, and Maintenance (CMOM) program for the sanitary sewer system. The program addresses ways in which City Corp will become more proactive in managing the collection system. City Corporation is currently developing a grease trap program and working to reduce the impact of fats, oils, and grease (FOG) on the system. Routine maintenance schedules are being developed for problem areas around the city. City Corporation is increasing its efforts to actively monitor the system, which will also help reduce the possibility of dry weather stoppages and overflows. Also, as City

Corporation continues to correct wet weather overflows, the system as a whole will improve and positively impact the number of occurrences of dry weather overflows.

5. Capacity, Management, Operation, and Maintenance Program

In accordance with the provision in the CAO, City Corporation will employ the services of a professional engineer licensed in the State of Arkansas to supervise City Corporation Staff in the development of a continuous Capacity, Management, Operation, and Maintenance Program (CMOM) for its wastewater collection system. The CMOM shall include the following elements:

- The CMOM shall enable City Corporation to properly manage, operate, and maintain, at all times, all parts of the collection system City Corporation owns or over which it retains operational control; provide adequate capacity to convey base flows and peak flows for all parts of the collection system City Corporation owns or over which it retains operational control and take all feasible steps to stop and mitigate the impact of non-wet weather related sanitary sewer overflows in portions of the collection system owned by City Corporation; and, provide notification to parties with a reasonable potential for exposure to pollutants associated with an overflow event.
- The CMOM shall include a Statement of Major Goals consistent with the bullet next above and a schedule for the implementation and achievement of the goals.
- The CMOM shall include documentation identifying City Corporation's authority to control private inflow sources; require that sewers and connections be properly designed and constructed; ensure proper installation, testing, and inspection of new and rehabilitated sewers (such collector sewers and service laterals); address flows from satellite municipal collection systems; and implement the general and specific prohibitions of the national pretreatment program which City Corporation is subject to under 40 CFR § 403.5.
- The CMOM shall include a list which shall identify the management/administrative personnel responsible for implementing the CMOM program, including lines of authority by organizational chart or similar document. The list shall also identify the individuals, or positions within its organization, responsible for the following elements:
 - Lift station operation and maintenance
 - Geographic Information System, a geo-based inventory of collection system assets and associated databases that supports system mapping and other utility operations;
 - Maintenance procedures that insure managers and supervisors are provided timely; relevant information from field personnel in order to establish and prioritize collections system activities (such as the elimination of dry weather overflows or overflows into sensitive waters based upon consideration of factors,

including: public drinking water supplies and their source waters, swimming beaches and waters where swimming occurs, shellfish beds, designated Outstanding National Resource Waters, waters within federal, state or local parks, and water containing threatened or endangered species or their habitat);

- Computerized Maintenance Management System, an asset information and work management software used to schedule and track all work performed on collection system, lift station, and wastewater treatment plant (WWTP) assets.
- Collection system preventive maintenance activities;
- Assessment of the current capacity of the collection system and treatment facilities which City Corporation owns or over which it retains operational control;
- Identification and prioritization of structural deficiencies and the short-term rehabilitation actions to address each deficiency;
- Collection system employee training;
- Equipment and replacement parts inventories, including identification of critical replacements parts; and,
- Trap Control Program to abate the impact of fats, oil, and grease (FOG) on the collection system.

- The CMOM shall establish requirements and standards for the installation of new sewers, pumps, and other appurtenances and rehabilitation and repair projects. The requirements and standards must include the specifications and procedures for testing the installation of new sewers, pumps, and other appurtenances, and for rehabilitation and repair projects.

- City Corporation shall develop a written summary of the CMOM program. This summary shall be made available to any member of the public upon request.

- City Corporation shall:

- Submit to ADEQ on or before March 31st each year annual reports for the previous calendar year on the implementation of each element of its CMOM program and on measurement of the program's effectiveness.
- Update CMOM program elements based on monitoring or performance evaluations.
- Modify the summary of its CMOM program, as appropriate, to keep it updated and accurate.

6. Treatment Plant Operations

Upon ADEQ's approval of the CAP for TSS described in Paragraph 3 of the Order and Agreement, and lasting until such time as the corrective actions required by that paragraph are completed or July 31, 2012, whichever comes first, City Corporation will implement operational procedures providing for bypass of the activated sludge treatment process with any wastewater that exceeds 6.5 million gallons a day (mgd) under the following conditions:

- City Corporation's PCW flow equalization basin must be full and/or incapable of receiving any additional flows;
- City Corporation shall notify ADEQ of the bypass within 24-hours (one working day) of beginning the bypass and will notify ADEQ no later than 24-hours (one working day) after bypassing has ceased;
- City Corporation shall bypass only those waters that exceed 6.5 mgd. All other waters will be routed through the activated sludge treatment process;
- All wastewater shall be routed through the disinfection process before being discharged;
- The wastewater shall be sampled in accordance with the requirements of the Permit;
- City Corporation shall submit to ADEQ a written follow-up report no later than five days after each bypass has been stopped;
- City Corporation shall publish the five-day reports on City Corporation's web site so that they are available for the public to review. These reports shall be published within one (1) week of submittal to the Department; and
- The Director at any time for any reason may withdraw permission to bypass the secondary process or change any of the above conditions upon written notice to City Corporation.

7. Timetable

Following is a timetable of major activities to be undertaken by City Corporation in this effort. The table also shows a projected date for attainment of permit compliance, allowing time after expected completion of construction to provide for potential delays in completion of that work and for start-up of the new facilities.

Table of Major Actions and Events

Revised May 28, 2010

City Corporation Wastewater Treatment Plant

Russellville, Arkansas

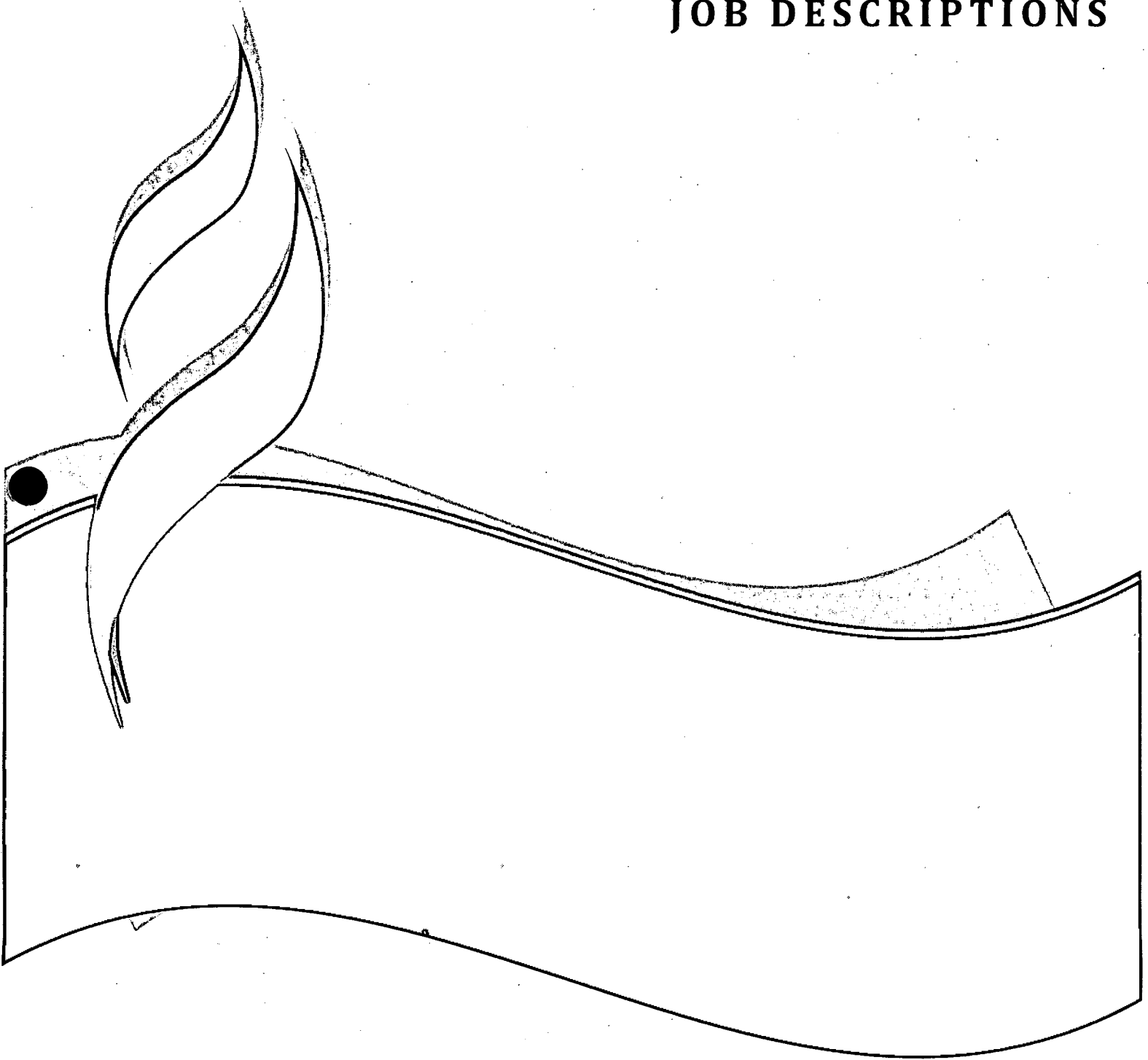
NPDES Permit No. AR0021768

Date	Event
December 25, 2009	Effective date of the CAO
January 4, 2010	Submission of Corrective Action Plan for TSS/TRC (TSS/TRC CAP)
January 10, 2010	Solicit qualifications for Engineering Services for SSES Phase I
January 10, 2010	Solicit qualifications for Engineering Services for program management and CMOM preparation
February 15, 2010	ADEQ Approval of TSS/TRC CAP
March 25, 2010	Select Engineer for program management and CMOM preparation, execute agreement, and issue Notice to Proceed
March 31, 2010	Select Engineer for SSES Phase I, execute agreement, issue Notice to Proceed
July 2010	Status Report with Environmental Protection Agency via Conference Call
September 1, 2010	Submission of Operations Modification Evaluation Program to address Nitrate removal to ADEQ
January 10, 2011	First quarterly progress report on operations modifications program for Nitrate removal
February 25, 2011	Complete SSES Phase I report, develop Milestone Schedule for SSES Phase II, and submit to ADEQ for approval
March 31, 2011	First annual report on implementation of CMOM
April 8, 2011	Quarterly progress report on operations modifications program for Nitrate removal

May 1, 2011	ADEQ Approval of SSES Phase I Report and Milestone Schedule for SSES Phase II
July 8, 2011	Quarterly progress report on operations modifications program for Nitrate removal
October 7, 2011	Quarterly progress report on operations modifications program for Nitrate removal
January 13, 2012	Quarterly progress report on operations modifications program for Nitrate removal
March 2012	Begin Collection System Remedial Action
April 6, 2012	Quarterly progress report on operations modifications program for Nitrate removal
July 6, 2012	Quarterly progress report on operations modifications program for Nitrate removal
July 31, 2012	Complete pilot study of disc filter, prepare construction plans and specifications, advertise for bids, award construction contract, complete construction and place facility into service, modify PCW operating procedure to prohibit bypass of activated sludge facilities.
October 5, 2012	Quarterly progress report on operations modifications program for Nitrate removal
December 31, 2012	Final Report on Successful Operations Modifications Program for Nitrate Removal Or, (if Operational Modifications are unsuccessful) Begin design, bidding, and construction of facilities to address nitrate and ammonia removal
January 10, 2016	Final Compliance date for Nitrate
* May 1, 2017 (See Note Below)	Complete SSES Phase II reports for each sub-basin
March 2022	Complete collection system remedial action and re-evaluate system
*Note – City Corporation Sewer System is divided into 30 sub-basins. This date is assuming that City Corporation will have to complete a detailed SSES of every sub-basin in the system.	

APPENDIX C

JOB DESCRIPTIONS





CITY CORPORATION
Position Description

POSITION TITLE: Construction Supervisor

Exempt (Y/N): Yes

DEPARTMENT: Construction

DATE PREPARED: August, 2006

SUPERVISOR: Operations Manager

SUMMARY

The incumbent is responsible for the safe, efficient work activities of all construction employees during normal day operations and after-hour emergencies. Maintain all water and sewer distribution mains & connections and repairs to company and state requirements.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

1. Responsible for the safe, efficient work activities of all construction employees during normal day operations and after hour's emergencies.
2. Assure that all main and service construction is completed in conformance with standard specifications and regulations of City Corporation, state and federal regulations.
3. Assist dispatch with scheduling and publishing routine and new work orders for water and sewer crews each day.
4. Schedule all construction employees' work hours, sick and vacation hours, on-call hours; maintain payroll records and work reports to manager.
5. Maintain records of materials for requirements regarding non-stock water and sewer items, permits and one-calls.
6. Coordinate activities of construction work force with developers, contractors, other utilities and other departments.
7. Responsible for building, grounds and organization of construction activities.

8. Responsible for system maintenance in the collection and distribution system.
9. Responsible for identifying, recording and repairing unsatisfactory conditions in the collection and distribution system.
10. Perform other related duties as required or assigned.

Budget Responsibility: \$ 931,950 Annual dollars
Facilities and Equipment Responsibility: \$ 972,500 Total value

SUPERVISION RESPONSIBILITIES

Directly supervises eleven non-supervisory positions within the department. Carries out supervisory responsibilities in accordance with the City's policies and applicable laws. Responsibilities include interviewing, hiring, and training employees; planning, assigning, and directing work; appraising performance, rewarding and disciplining employees; addressing complaints and resolving problems.

EDUCATION AND EXPERIENCE

High school diploma or GED plus specialized training and/or additional college courses and five years of related experience and/or training; or equivalent combination of education and experience and a minimum of two years of management experience.

LANGUAGE SKILLS

Ability to read, analyze, and interpret general business periodicals, professional journals, technical procedures, or governmental regulations. Ability to write reports, business correspondence, and procedure manuals. Ability to effectively present information and respond to questions from groups of managers, clients, customers, and the general public. Ability to respond to common inquiries or complaints from customers, regulatory agencies, or members of the business community. Ability to write speeches and articles for publication that conform to prescribed style and format. Ability to effectively present information to top management, public groups, and/or boards of directors.

MATHEMATICAL SKILLS

Ability to calculate figures and amounts such as discounts, interest, commissions, proportions, percentages, area, circumference, and volume. Ability to apply concepts of basic algebra and geometry. Ability to apply concepts such as fractions, percentages, ratios, and proportions to practical situations.

REASONING ABILITY

Ability to define problems, collect data, establish facts, and draw valid conclusions. Ability to interpret an extensive variety of technical instructions in mathematical or diagram form and deal with several abstract and concrete variables.

CERTIFICATES, LICENSES, REGISTRATIONS

Must possess a valid Class A CDL, Class 4 Treatment License, Class 4 Distribution License, Class 2 Wastewater License, Trench Safety/Confined Space Entry Certification, Plumbing Inspector License, Back Flow Testing License.

INTERNAL COMMUNICATIONS

Regular contacts within the department and with other departments as needed.

EXTERNAL COMMUNICATIONS

Regular contacts with vendors, contractors, developers, AHTD, citizens, various utility companies and outside representatives.

USE OF EQUIPMENT AND/OR COMPUTERS

Must be proficient in the use of a personal computer, various associated software programs and standard office equipment. Must be able to use tape measure, measuring wheel, metal locator, leak detector, main line locator, sewer camera, back hoe, jack hammer, trash pump and 2 way radio.

OTHER SKILLS AND ABILITIES

Ability to utilize both internal and external resources to obtain information and data necessary to carry out routine assignments and special projects. Must have ability to establish and maintain effective working relationships with management and staff.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions and expectations.

While performing the functions of this job, the employee is regularly required to talk or hear. The employee frequently is required to stand, walk, and sit. The employee is occasionally required to use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; and taste or smell. The employee must regularly lift and/or move more than 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the functions of this job, the employee is occasionally exposed to moving mechanical parts; fumes or airborne particles; toxic or caustic chemicals; outside weather conditions; risk of electrical shock; and risk of vibration.

The noise level in the work environment is usually loud.



CITY CORPORATION
Position Description

POSITION TITLE: Laboratory Analyst

Exempt(Y/N): No

DEPARTMENT: Laboratory

DATE PREPARED: August, 2006

SUPERVISOR: Pretreatment Coordinator-Lab Lead

SUMMARY

The incumbent is responsible to perform chemical and biological testing and provide information and data for various plant operations and as required by local, state and federal regulatory agencies.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

1. Gather and receives water, wastewater and sludge samples from treatment plant, collections/distribution system, performs various analytical test using approved methods as required by regulatory agencies.
2. Perform QA/QC control procedures and maintain QA/QC records.
3. Maintain bench sheets, analytical equipment calibration sheets and chain-of-custody sheets, enter data into operations program daily.
4. Maintain cleanliness and safety of laboratory.
5. Calibrate laboratory equipment.
6. Submit purchase order requests and maintain bench supply levels for laboratory.
7. Answer phone messages and customer requests for both in house and outside customers.
8. Perform special analytical tests as requested by operations manager.
9. Perform other duties as required or assigned.

Budget Responsibility: \$ N/A Annual dollars
Facilities and Equipment Responsibility: \$ 25,000 Total value

EDUCATION AND EXPERIENCE

Bachelor's degree (B.A. or B.S.) from four year college or university and 7-11 months of related experience and/or training; or equivalent combination of education and experience.

LANGUAGE SKILLS

Ability to read, analyze, and interpret common scientific and technical journals, financial reports, and legal documents. Ability to respond to common inquiries or complaints from customers, regulatory agencies, or members of the business community. Ability to effectively present information to top management, public groups, and/or boards of directors.

Ability to read, analyze, and interpret the most complex documents. Ability to respond effectively to the most sensitive inquiries or complaints. Ability to write speeches and articles using original or innovative techniques or style. Ability to make effective and persuasive speeches and presentations on controversial or complex topics to top management.

MATHEMATICAL SKILLS

Ability to apply advanced mathematical concepts such as exponents and logarithms. Ability to apply mathematical operations to such tasks as determination of test reliability and validity, analysis of variance and correlation techniques.

REASONING ABILITY

Ability to define problems, collect data, establish facts, and draw valid conclusions. Ability to interpret an extensive variety of technical instructions in mathematical or diagram form and deal with several abstract and concrete variables.

CERTIFICATES, LICENSES, REGISTRATIONS

Must possess or obtain within one year of employment the following: Arkansas Grade IV Distribution Operator License and Arkansas Class IV Wastewater Operator License.

INTERNAL COMMUNICATIONS

Regular contacts within the department and with other departments as needed.

EXTERNAL COMMUNICATIONS

Regular contacts with EEG, State and Federal Environmental agencies and supply vendors.

USE OF EQUIPMENT AND/OR COMPUTERS

Must be proficient in the use of a personal computer, various associated software programs, standard office equipment, ovens, portable analysis, spectrophotometers, dissolved oxygen meters, incubator, PH meter, vacuum pump, heating mantles, balances, thermometers, muffle furnace and centrifuge.

OTHER SKILLS AND ABILITIES

Ability to utilize both internal and external resources to obtain information and data necessary to carry out routine assignments and special projects. Must have ability to establish and maintain effective working relationships with management and staff.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions and expectations.

While performing the functions of this job, the employee is regularly required to talk or hear. The employee frequently is required to stand, walk, and sit. The employee is occasionally required to use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; and taste or smell. The employee must occasionally lift and/or move up to 50 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the functions of this job, the employee is occasionally exposed to fumes or airborne particles; toxic or caustic chemicals and outside weather conditions.

The noise level in the work environment is usually quiet.



CITY CORPORATION
Position Description

POSITION TITLE: Lineman I

Exempt (Y/N): No

DEPARTMENT: Construction

DATE PREPARED: August, 2006

SUPERVISOR: Construction Supervisor

SUMMARY

The incumbent is responsible to safely perform assigned tasks necessary for installation of main pipelines and service lines, and associated valves and/or manholes. Test and monitor equipment, etc., for new construction, repair, maintenance as required by both the water and sewer system, in accordance with state and federal laws and to City Corp standards.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

1. Transport appropriate equipment to work site.
2. Perform assigned tasks, which may include operation of backhoe, small or large boring machines for repairs and maintenance and for new construction of water/sewer mains and service lines.
3. Perform preventive maintenance on assigned equipment and report needed repairs to supervisor.
4. Respond to after-hours service calls.
5. Perform all work in accordance with company safety standards.
6. Perform other related duties as required or assigned.

Budget Responsibility:

\$ N/A Annual dollars

Facilities and Equipment Responsibility:

\$ 50,000 Total value

EDUCATION AND EXPERIENCE

High school diploma or GED and 1-6 months of related experience and/or training; or equivalent combination of education and experience.

LANGUAGE SKILLS

Ability to read and comprehend simple instructions, short correspondence, and memos. Ability to write simple correspondence. Ability to effectively present information in one-on-one and small group situations to customers, clients, and other employees of the organization.

MATHEMATICAL SKILLS

Ability to add, subtract, multiply, and divide in all units of measure, using whole numbers, common fractions, and decimals. Ability to compute volume.

REASONING ABILITY

Ability to apply common sense understanding to carry out detailed but uninvolved written or oral instructions. Ability to deal with problems involving a few concrete variables in standardized situations.

CERTIFICATES, LICENSES, REGISTRATIONS

Must possess a valid Arkansas Drivers License and obtain a Class A Arkansas Commercial Driver's License, or ability to obtain within one year of employment.

INTERNAL COMMUNICATIONS

Regular contacts within the department and with other departments as needed.

EXTERNAL COMMUNICATIONS

Occasional contacts with utility companies and plumbers.

USE OF EQUIPMENT AND/OR COMPUTERS

Must be proficient in the use of backhoe, dump truck, packer, hand tools, boring equipment, jackhammer, jetter, vac, rodder, cut off saw, pumps, tapping machines, trucks, camera equipment and smoking equipment.

OTHER SKILLS AND ABILITIES

Ability to utilize both internal and external resources to obtain information necessary to carry out routine assignments and special projects. Must have ability to establish and maintain effective working relationships with management and staff.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions and expectations.

While performing the functions of this job, the employee is regularly required to talk or hear. The employee frequently is required to stand, walk, and sit. The employee is occasionally required to use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; and taste or smell. The employee must regularly lift and/or move more than 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the functions of this job, the employee is occasionally exposed to moving mechanical parts; high, precarious places, fumes or airborne particles; toxic or caustic chemicals; outside weather conditions; risk of electrical shock; and risk of vibration.

The noise level in the work environment is usually very loud.



CITY CORPORATION
Position Description

POSITION TITLE: Lineman II

Exempt (Y/N): No

DEPARTMENT: Construction

DATE PREPARED: August, 2006

SUPERVISOR: Construction Supervisor

SUMMARY

The incumbent is responsible to safely perform assigned tasks necessary for installation of main pipe lines and service lines, and associated valves and/or manholes. Test and monitor equipment, etc. for new construction, repair, maintenance, as required by both the water and sewer system in accordance with state and federal laws and City Corp standards.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

1. Perform assigned tasks necessary for installation of main pipe lines and service lines, and associated valves, manholes, test and monitoring equipment, etc. for new construction, repair, maintenance as required by both the water and sewer system.
2. Transport appropriate equipment to work site.
3. Perform assigned tasks, which may include operation of backhoe, small or large boring machines for repair and maintenance and for new construction of water and sewer mains and service lines.
4. Perform preventive maintenance on assigned equipment, reports needed repairs to supervisor.
5. Respond to after-hours service calls.
6. Perform all work in accordance with company safety standards.
7. Perform other related duties as required or assigned.

Budget Responsibility:

\$ N/A Annual dollars

Facilities and Equipment Responsibility:

\$ 150,000 Total value

EDUCATION AND EXPERIENCE

High school diploma or GED and two years of related experience and/or training; or equivalent combination of education and experience.

LANGUAGE SKILLS

Ability to read and comprehend simple instructions, short correspondence, and memos. Ability to write simple correspondence. Ability to effectively present information in one-on-one and small group situations to customers, clients, and other employees of the organization.

MATHEMATICAL SKILLS

Ability to add, subtract, multiply, and divide in all units of measure, using whole numbers, common fractions, and decimals. Ability to compute rate, ratio, and percent and to draw and interpret bar graphs.

REASONING ABILITY

Ability to apply common sense understanding to carry out instructions furnished in written, oral, or diagram form. Ability to deal with problems involving several concrete variables in standardized situations.

CERTIFICATES, LICENSES, REGISTRATIONS

Must possess a valid Class A Arkansas Commercial Driver's License, Confined Space Entry Training, Back Hoe Test, Competent Person Training.

INTERNAL COMMUNICATIONS

Regular contacts within the department and with other departments as needed.

EXTERNAL COMMUNICATIONS

Frequent contacts with plumbers, One Call, utility companies, customers, contractors, developers, AHTD, RPD and 911.

USE OF EQUIPMENT AND/OR COMPUTERS

Must be proficient in the use of backhoe, dump truck, packer, hand tools, boring equipment, jackhammer, jetter, vac, rodder, cut off saw, pumps, tapping machines, trucks, camera equipment and smoking equipment.

OTHER SKILLS AND ABILITIES

Ability to utilize both internal and external resources to obtain information necessary to carry out routine assignments and special projects. Must have ability to establish and maintain effective working relationships with management and staff.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions and expectations.

While performing the functions of this job, the employee is regularly required to talk or hear. The employee frequently is required to stand, walk, and sit. The employee is occasionally required to use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; and taste or smell. The employee must regularly lift and/or move more than 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the functions of this job, the employee is occasionally exposed to moving mechanical parts; high, precarious places, fumes or airborne particles; toxic or caustic chemicals; outside weather conditions; risk of electrical shock; and risk of vibration.

The noise level in the work environment is usually very loud.



CITY CORPORATION
Position Description

POSITION TITLE: Lineman III

Exempt (Y/N): No

DEPARTMENT: Construction

DATE PREPARED: August, 2006

SUPERVISOR: Construction Supervisor

SUMMARY

The incumbent is responsible for the safe, efficient work and operations of light to medium duty construction equipment. Constructs and repairs water and wastewater mains and service lines to all state/federal/city codes to insure public health. Must have the ability to make correct maintenance decisions in the field.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

1. Perform assigned tasks safely for installation of main pipe lines and services lines as well as associated valves, manholes, test and monitoring equipment, etc. For new construction, repair, maintenance as required by state/federal and City Corp standards.
2. Transport appropriate equipment to work site.
3. Perform assigned tasks, which may include operation of backhoe, small or large boring machines for repairs and maintenance and for new construction of water/sewer mains and service lines to City Corp specifications and state/federal laws.
4. Perform preventive maintenance on assigned equipment; reports needed repairs to supervisor, reports materials used out of inventory to supervisor, reports needed repairs to systems as observed.
5. Respond to after-hours service calls.
6. Perform all work in accordance with company safety standards.
7. Perform other job-related duties as assigned.

Budget Responsibility:

\$ N/A Annual dollars

Facilities and Equipment Responsibility:

\$ 150,000 Total value

EDUCATION AND EXPERIENCE

High school diploma or GED and five years of related experience and/or training; or equivalent combination of education and experience and 7-11 months management experience.

LANGUAGE SKILLS

Ability to read and interpret documents such as safety rules, operating and maintenance instructions, and procedure manuals. Ability to write routine reports and correspondence. Ability to speak effectively before groups of customers or employees of organization.

MATHEMATICAL SKILLS

Ability to calculate figures and amounts such as discounts, interest, commissions, proportions, percentages, area, circumference, and volume. Ability to apply concepts of basic algebra and geometry.

REASONING ABILITY

Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret a variety of instructions furnished in written, oral, diagram, or schedule form.

CERTIFICATES, LICENSES, REGISTRATIONS

Must possess a valid Arkansas Class A Commercial Driver's License, Water Distribution III License, Wastewater I License, Trench Safety, Confined Space Entry, Class A CDL and AHTD Traffic Safety.

INTERNAL COMMUNICATIONS

Regular contacts within the department and with other departments as needed.

EXTERNAL COMMUNICATIONS

Regular contacts with customers, plumbers, Arkansas Once Call, utility companies, public works, developers, contractors, engineers, AHTD, RPD and 911.

USE OF EQUIPMENT AND/OR COMPUTERS

Must be proficient in the use of large and small trucks, trailers, pumps, boring equipment, hand tools, jack hammers, street cut saw, cut off saw, backhoe, tiger vac, jetter, rooder, camera equipment, smoking equipment, mental locator, leak detector, shovels, pick, probing rod, rock bar, chain saw, weed eater and lawn tractor.

OTHER SKILLS AND ABILITIES

Ability to utilize both internal and external resources to obtain information necessary to carry out routine assignments and special projects. Must have ability to establish and maintain effective working relationships with management and staff.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions and expectations.

While performing the functions of this job, the employee is regularly required to talk or hear. The employee frequently is required to stand, walk, and sit. The employee is occasionally required to use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; and taste or smell. The employee must regularly lift and/or move more than 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the functions of this job, the employee is occasionally exposed to moving mechanical parts; fumes or airborne particles; toxic or caustic chemicals; outside weather conditions; risk of electrical shock; and risk of vibration.

The noise level in the work environment is usually loud.



CITY CORPORATION
Position Description

POSITION TITLE: Lineman IV

Exempt (Y/N): No
DATE PREPARED: August, 2006

DEPARTMENT: Construction
SUPERVISOR: Construction Supervisor

SUMMARY

The incumbent is responsible to locate main shut downs, check plans, review engineering plans, set jobs up with contractors, review new projects to insure proper installation and assist supervisor in daily tasks as needed.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

1. Perform locates in order to keep mains from being damaged due to construction work.
2. Shut main lines down for repairs to keep water safe for consumption.
3. Review new plans to insure proper operation is achieved.
4. Work with contractors to insure jobs are performed correctly.
5. Work with Construction Supervisor to line up projects.
6. Acquire easements and right of ways.
7. Advise/evaluate effected areas on boil orders.
8. Work with plant on special projects and problems.
9. Advise on leaks for emergencies.
10. Work with dispatch on new services to Arkansas One Call.

11. Swap system from tank to tank on pressure zones.

12. Perform other duties as required or assigned.

Budget Responsibility:

\$ N/A Annual dollars

Facilities and Equipment Responsibility:

\$ 146,100 Total value

EDUCATION AND EXPERIENCE

High school diploma or GED plus specialized training and/or additional college courses and five years of related experience and/or training; or equivalent combination of education and experience and 7-11 months management experience.

LANGUAGE SKILLS

Ability to read, analyze, and interpret general business periodicals, professional journals, technical procedures, or governmental regulations. Ability to write reports, business correspondence, and procedure manuals. Ability to effectively present information and respond to questions from groups of managers, clients, customers, and the general public.

MATHEMATICAL SKILLS

Ability to calculate figures and amounts such as discounts, interest, commissions, proportions, percentages, area, circumference, and volume. Ability to apply concepts of basic algebra and geometry. Ability to apply concepts such as fractions, percentages, ratios, and proportions to practical situations.

REASONING ABILITY

Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret a variety of instructions furnished in written, oral, diagram, or schedule form.

CERTIFICATES, LICENSES, REGISTRATIONS

Must possess a valid Class A Arkansas Commercial Driver's License, Water IV Distribution License, Wastewater I License, Class A CDL, Confined Space and Trench Safety.

INTERNAL COMMUNICATIONS

Regular contacts within the department and with other departments as needed.

EXTERNAL COMMUNICATIONS

Regular contacts with contractors, city officials, engineer, utility companies, Arkansas One Call and plumbers.

USE OF EQUIPMENT AND/OR COMPUTERS

Must be proficient in the use of backhoe, vac, jetter, dozer, locators, leak detectors, calculators, valve locators and wheel measurers.

OTHER SKILLS AND ABILITIES

Ability to utilize both internal and external resources to obtain information necessary to carry out routine assignments and special projects. Must have ability to establish and maintain effective working relationships with management and staff.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions and expectations.

While performing the functions of this job, the employee is regularly required to talk or hear. The employee frequently is required to stand, walk, and sit. The employee is occasionally required to use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; and taste or smell. The employee must regularly lift and/or move up to 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the functions of this job, the employee is occasionally exposed to moving mechanical parts; fumes or airborne particles; toxic or caustic chemicals; outside weather conditions; risk of electrical shock; and risk of vibration.

The noise level in the work environment is usually moderate.



CITY CORPORATION
Position Description

POSITION TITLE: Operations Clerk

Exempt (Y/N): No

DEPARTMENT: Operations

DATE PREPARED: August, 2007

SUPERVISOR: Operations Manager

SUMMARY

The incumbent is responsible for assisting the Operations Manager, Pollution Control Facility, ConAgra Pretreatment Plant, Water Treatment Plant, Laboratory, pretreatment Program, and Construction departments.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

1. Prepares payrolls for the Pollution Control Facility, Water Treatment Plant, ConAgra Pretreatment Plant, Construction department and Laboratory. Submits the same to appropriate supervisor for approval.
2. Organizes, types, and maintains files of a variety of reports, letters, DMRs, sludge reports and the monthly WTP Surface Water Operations report for the Arkansas Department of Health and Human Services.
3. Does data entries of Pollution Control Facility, Water Treatment Plant, and Pump Stations and Laboratory data, making corrections as needed.
4. Collects and enters Pollution Control Facility, Water Treatment Plant and Construction inventory data.
5. Answers and addresses incoming calls and customers for the Operations department.
6. Schedules appointments and maintains appointment calendars for Operations Manager and the Pretreatment Coordinator.

7. Maintains MSDS information for the Pollution Control Facility, ConAgra Pretreatment Plant, Water Treatment Plant and Construction departments.
8. Maintains safety meeting records and attendance lists for Operations.
9. Assists in the preparation of Pollution Control Facility, ConAgra Pretreatment Plant, Laboratory, Pretreatment, Water Treatment Plant and Construction department O & M budgets.

Budget Responsibility:

\$ N/A Annual dollars

Facilities and Equipment Responsibility:

\$ 100,000 Total value

EDUCATION AND EXPERIENCE

High school diploma or GED; plus one year of specialized training in business management, business education or a related field; plus no less than one year experience in a specialized or related field applicable to work performed.

LANGUAGE SKILLS

Ability to read, analyze, and interpret common scientific and technical journals, financial reports, and legal documents. Ability to respond to common inquiries or complaints from customers, regulatory agencies, or members of the business community.

MATHEMATICAL SKILLS

Ability to calculate figures and amounts such as discounts, interest, commissions, proportions, percentages, area, circumference, and volume. Ability to apply concepts of basic algebra and geometry.

REASONING ABILITY

Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret a variety of instructions furnished in written, oral, diagram, or schedule form.

CERTIFICATES, LICENSES, REGISTRATIONS

None required.

INTERNAL COMMUNICATIONS

Regular contacts within the department and with other departments as needed.

EXTERNAL COMMUNICATIONS

Regular contacts with vendors and customers as needed.

USE OF EQUIPMENT AND/OR COMPUTERS

Must be proficient in the use of a personal computer, 10-key, various associated software programs and standard office equipment.

OTHER SKILLS AND ABILITIES

Ability to utilize both internal and external resources to obtain information and data necessary to carry out routine assignments and special projects. Must have ability to establish and maintain effective working relationships with management and staff.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions and expectations.

While performing the functions of this job, the employee is regularly required to talk or hear. The employee frequently is required to stand, walk, and sit. The employee is occasionally required to use hands to finger, handle, or feel; reach with hands and arms. The employee must regularly lift and/or move more than 25 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The noise level in the work environment is usually moderate.



CITY CORPORATION
Position Description

POSITION TITLE:
Operations Manager

Exempt (Y/N): Yes

DEPARTMENT: Operations

DATE PREPARED: October, 2006

SUPERVISOR: General Manager

SUMMARY

The incumbent is responsible to direct and coordinate daily operations of the following: Waste & Treatment Plant, Laboratory, Industrial Treatment Plant, Water Treatment Plant & Reservoir, Construction Water and Sewer distribution and Collection System Personnel to see that all is in compliance with state and federal regulations.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

1. Direct Subordinate Personnel in the performance of their duties daily.
2. Analyze and evaluate operations and maintenance functions daily.
3. Develop plans and procedures to insure efficient operations.
4. Plan and prepare annual budgets for assigned departments.
5. Study data and make recommendations for operations improvements.
6. Make regular inspections of facilities weekly.
7. Prepare and ensure that data is available for reports daily (ADH, ADE/Q, SPA, etc).
8. Insures that subordinate personnel work is conducted in a safe and responsible manner.
9. Perform other related duties as required or assigned.

Operations Manager
2/26/2013

Budget Responsibility:

\$3.7MM Annual dollars

Facilities and Equipment Responsibility:

\$ 50MM Total value

SUPERVISION RESPONSIBILITIES

Directly supervises five subordinate supervisors who supervise a total of 27 employees in the department. Carries out supervisory responsibilities in accordance with the City's policies and applicable laws. Responsibilities include interviewing, hiring, and training employees; planning, assigning, and directing work; appraising performance, rewarding and disciplining employees; addressing complaints and resolving problems.

EDUCATION AND EXPERIENCE

Bachelor's degree (B.A. or B.S.) from four year college and five years of related experience and/or training and five years of management experience.

LANGUAGE SKILLS

Ability to read, analyze, and interpret common scientific and technical journals, financial reports, and legal documents. Ability to respond to common inquiries or complaints from customers, regulatory agencies, or members of the business community. Ability to write speeches and articles for publication that conform to prescribed style and format. Ability to effectively present information to top management, public groups, and/or boards of directors.

MATHEMATICAL SKILLS

Ability to calculate figures and amounts such as discounts, interest, commissions, proportions, percentages, area, circumference, and volume.

REASONING ABILITY

Ability to define problems, collect data, establish facts, and draw valid conclusions. Ability to interpret an extensive variety of technical instructions in diagram form and deal with several abstract and concrete variables.

CERTIFICATES, LICENSES, REGISTRATIONS

Must possess a Grade A Surface License, Grade A Distribution License, Grade 4 Wastewater License, and Grade 4 Industrial License.

INTERNAL COMMUNICATIONS

Daily contacts within the department and with other departments as needed.

EXTERNAL COMMUNICATIONS

Weekly contacts with engineers, vendors, public works, customers, and contractors.

USE OF EQUIPMENT AND/OR COMPUTERS

Must be proficient in the use of a personal computer various associated software programs and standard office equipment. Daily use of XL, OPS, AS400, WSR, and weekly use of cameras.

OTHER SKILLS AND ABILITIES

Ability to utilize both internal and external resources to obtain information and data necessary to carry out routine assignments and special projects. Must have ability to establish and maintain effective working relationships with management and staff.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions and expectations.

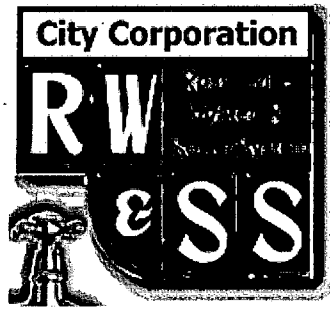
While performing the functions of this job, the employee is regularly required to talk or hear. The employee frequently is required to stand, walk, and sit. The employee is occasionally required to use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; and taste or smell. The employee must regularly lift and/or move up to 25 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the functions of this job, the employee is occasionally exposed to moving mechanical parts; toxic or caustic chemicals; outside weather conditions.

The noise level in the work environment is usually moderate.



CITY CORPORATION
Position Description

POSITION TITLE: PCW Lead Operator Trainee

Exempt (Y/N): No
DATE PREPARED: August, 2006

DEPARTMENT: Pollution Control Works
SUPERVISOR: Operations Manager

SUMMARY

The incumbent is responsible to monitor plant operations, supervise employees, make plant adjustments, oversee the pumping of sludge, make reports, inventory chemicals, repair equipment and order chemicals/supplies as needed. This position will be used as a training position for the possibility of advancing to a lead operator or other supervisory position in the company. Potential advancement will be based on individual performance in this position.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

1. Hand out and close work orders,
2. Enter and correct pay-roll time.
3. Take DOB's and make out reports.
4. Pick up or order supplies, chemicals, tools, safety products, offices supplies and miscellaneous other needs.
5. Monitor the plant and make necessary adjustments on the plant, includes gates, valves and air.
6. Make out work schedules.
7. Monitor and repair pumps and equipment and perform assigned duties in regard to sludge management.

8. Perform required laboratory analysis in regard to operational aspects of wastewater plant and maintain reports of results of temperatures, dissolved oxygen, PH, sludge, volume index and chlorine residual test.
9. Assist with maintenance of plant buildings and grounds.
10. Maintain required records and reports for the EPA, ADEQ and Arkansas Department of Health.
11. Enter all data and reports on computer.
12. Read meters, change charts, record pump run hours.
13. Perform minor electrical work and chemical inventory.
14. Perform other related duties as required or assigned.

Budget Responsibility:

\$ 734,033 Annual dollars

Facilities and Equipment Responsibility:

\$ 10MM Total value

SUPERVISION RESPONSIBILITIES

Directly supervises five non-supervisory positions within the department. Carries out supervisory responsibilities in accordance with the City's policies and applicable laws. Responsibilities include interviewing, hiring, and training employees; planning, assigning, and directing work; appraising performance, rewarding and disciplining employees; addressing complaints and resolving problems.

EDUCATION AND EXPERIENCE

High school diploma or GED plus specialized training and/or additional college courses and five years of related experience and/or training; or equivalent combination of education and experience and 12-18 months management experience.

LANGUAGE SKILLS

Ability to read, analyze, and interpret common scientific and technical journals, financial reports, and legal documents. Ability to respond to common inquiries or complaints from customers, regulatory agencies, or members of the business community. Ability to write speeches and articles for publication that conform to prescribed style and format. Ability to effectively present information to top management, public groups, and/or boards of directors.

MATHEMATICAL SKILLS

Ability to calculate figures and amounts such as discounts, interest, commissions, proportions, percentages, area, circumference, and volume. Ability to apply concepts of basic algebra and geometry.

REASONING ABILITY

Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret a variety of instructions furnished in written, oral, diagram, or schedule form.

CERTIFICATES, LICENSES, REGISTRATIONS

Must possess the following; Class IV Wastewater License minimum of two years experience/knowledge of State and Federal regulations, training in chemical safety, sampling and laboratory testing computer program.

INTERNAL COMMUNICATIONS

Regular contacts within the department and with other departments as needed.

EXTERNAL COMMUNICATIONS

Regular contacts with vendors, outside representatives, utility companies, engineers and ADEQ.

USE OF EQUIPMENT AND/OR COMPUTERS

Must be proficient in the use of a personal computer, various associated software programs, standard office equipment, skid loaders, dump truck, backhoe, pumps, PH meter, volt meter, valves, gates, trucks, trailer, spreader and two-way radio.

OTHER SKILLS AND ABILITIES

Ability to utilize both internal and external resources to obtain information and data necessary to carry out routine assignments and special projects. Must have ability to establish and maintain effective working relationships with management and staff.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions and expectations.

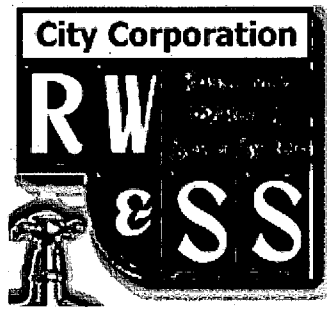
While performing the functions of this job, the employee is regularly required to talk or hear. The employee frequently is required to stand, walk, and sit. The employee is occasionally required to use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; and taste or smell. The employee must occasionally lift and/or move more than 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the functions of this job, the employee is occasionally exposed to wet/and or humid conditions, moving mechanical parts; high, precarious places, fumes or airborne particles; toxic or caustic chemicals; outside weather conditions; extreme heat and risk of electrical shock

The noise level in the work environment is usually loud.



CITY CORPORATION
Position Description

POSITION TITLE: Pretreatment Coordinator

Exempt (Y/N): No.

DEPARTMENT: Laboratory

DATE PREPARED: August, 2006

SUPERVISOR: Operations Manager

SUMMARY

The incumbent is responsible to administer the pretreatment program; direct and coordinate the activities of laboratory personnel.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

1. Train and supervise work of laboratory analysts, maintains quality control and conducts periodic performance evaluations.
2. Administer and monitor pretreatment program to assure compliance with all local, state and federal regulations.
3. Maintain pretreatment files for all permitted industries, review self monitoring reports.
4. Make record of non-compliance areas. Correspond with industrial rep to report non-compliance.
5. Make necessary changes in pretreatment regulations as direct by state and/or EPA.
6. Assist industrial users with specific pretreatment problems and provide training.
7. Schedule and conduct industrial inspections.
8. Prepare budgets for pretreatment and laboratory.
9. Prepare monthly NPDES reports.

10. Prepare annual bio-solids report to EPA.

11. Perform other duties as required or assigned.

Budget Responsibility: \$ 154,631 Annual dollars
Facilities and Equipment Responsibility: \$ 200,000 Total value

SUPERVISION RESPONSIBILITIES

Directly supervises two non-supervisory positions within the department. Carries out supervisory responsibilities in accordance with the City's policies and applicable laws. Responsibilities include interviewing, hiring, and training employees; planning, assigning, and directing work; appraising performance, rewarding and disciplining employees; addressing complaints and resolving problems.

EDUCATION AND EXPERIENCE

Bachelors degree (B.A. or B.S.) from four year college or university and five years of related experience and/or training; or equivalent combination of education and experience and a minimum of 12-18 months of management experience.

LANGUAGE SKILLS

Ability to read, analyze, and interpret common scientific and technical journals, financial reports, and legal documents. Ability to respond to common inquiries or complaints from customers, regulatory agencies, or members of the business community. Ability to write speeches and articles for publication that conform to prescribed style and format. Ability to effectively present information to top management, public groups, and/or boards of directors.

MATHEMATICAL SKILLS

Ability to apply advanced mathematical concepts such as exponents, logarithms and quadratic equations. Ability to apply mathematical operations to such tasks as frequency distribution, determination of test reliability and validity, analysis of variance, correlation techniques, sampling theory, and factor analysis.

REASONING ABILITY

Ability to define problems, collect data, establish facts, and draw valid conclusions. Ability to interpret an extensive variety of technical instructions in mathematical or diagram form and deal with several abstract and concrete variables.

CERTIFICATES, LICENSES, REGISTRATIONS

Must possess a valid Arkansas Driver's License, Arkansas Grade IV Surface Water Treatment, Arkansas Grade IV Distribution License and Arkansas Class IV Wastewater Operator License.

INTERNAL COMMUNICATIONS

Regular contacts within the department and with other departments as needed.

EXTERNAL COMMUNICATIONS

Regular contacts with industrial representatives, EEG, contract lab, state and federal environmental agencies.

USE OF EQUIPMENT AND/OR COMPUTERS

Must be proficient in the use of a personal computer, ovens, portable analyzers, spectrophotometer, dissolved oxygen meter, incubator, PH meter, vacuum pump, heating mantles, balances, thermometers, muffle furnace and centrifuge.

OTHER SKILLS AND ABILITIES

Ability to utilize both internal and external resources to obtain information and data necessary to carry out routine assignments and special projects. Must have ability to establish and maintain effective working relationships with management and staff.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions and expectations.

While performing the functions of this job, the employee is regularly required to talk or hear. The employee frequently is required to stand, walk, and sit. The employee is occasionally required to use hands to finger, handle, or feel; reach with hands and arms; stoop, kneel, crouch, or crawl; and taste or smell. The employee must occasionally lift and/or move up to 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the functions of this job, the employee is occasionally exposed to wet/and or humid conditions, moving mechanical parts; fumes or airborne particles; toxic or caustic chemicals; outside weather conditions and risk of electrical shock.

The noise level in the work environment is usually moderate.



CITY CORPORATION
Position Description

POSITION TITLE: WW Operator I

Exempt (Y/N): No

DEPARTMENT: PTP or PCW

DATE PREPARED: August, 2006

SUPERVISOR: Lead Operator

SUMMARY

The incumbent is responsible to perform assigned duties to assure proper operations and maintenance of plant and equipment.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

1. Operate various pumps and equipment.
2. Inspect pumps and equipment for defects.
3. Repair defective pumps and equipment using proper tools.
4. Read meters, record information and change charts.
5. Perform assigned duties in regard to sludge management practices.
6. Perform required laboratory analysis in regard to operational aspects of plant.
7. Maintain records of temperature, dissolved oxygen, PH, sludge volume index and chemical readings.
8. Assist in plant maintenance as needed.
9. Perform other related duties as required or assigned.

Budget Responsibility:

\$ N/A Annual dollars

Facilities and Equipment Responsibility:

\$ 1MM Total value

EDUCATION AND EXPERIENCE

High school diploma or GED and 1-6 months of related experience and/or training; or equivalent combination of education and experience.

LANGUAGE SKILLS

Ability to read and interpret documents such as safety rules, operating and maintenance instructions, and procedure manuals. Ability to write routine reports and correspondence.

Ability to speak effectively before groups of customers or employees of organization.

MATHEMATICAL SKILLS

Ability to add, subtract, multiply, and divide in all units of measure, using whole numbers, common fractions, and decimals. Ability to compute rate, ratio, and percent and to draw and interpret bar graphs.

REASONING ABILITY

Ability to apply common sense understanding to carry out instructions furnished in written, oral, or diagram form. Ability to deal with problems involving several concrete variables in standardized situations.

CERTIFICATES, LICENSES, REGISTRATIONS

Must possess a Class I Wastewater License.

INTERNAL COMMUNICATIONS

Regular contacts within the department and with other departments as needed.

EXTERNAL COMMUNICATIONS

Regular contacts with vendors, citizens and outside representatives.

USE OF EQUIPMENT AND/OR COMPUTERS

Must be proficient in the use of a personal computer, various associated software programs, water testing equipment, LMI pumps, weed eater, lawn mower, case un-loader, truck buffer, broom, hand tools, analytical equipment, PH meter, Cl2 analyzers, autocon telemetry, pumps, SCADA equipment and standard office equipment.

OTHER SKILLS AND ABILITIES

Ability to utilize both internal and external resources to obtain information and data necessary to carry out routine assignments and special projects. Must have ability to establish and maintain effective working relationships with management and staff.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions and expectations.

While performing the functions of this job, the employee is regularly required to talk or hear. The employee frequently is required to stand, walk, and sit. The employee is occasionally required to use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; and taste or smell. The employee must regularly lift and/or move more than 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the functions of this job, the employee is occasionally exposed to wet/and or humid conditions, moving mechanical parts; high, precarious places, fumes or airborne particles; toxic or caustic chemicals; outside weather conditions and risk of electrical shock.

The noise level in the work environment is usually loud.

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CITY CORPORATION
Position Description

POSITION TITLE: WW Operator II

Exempt (Y/N): No

DEPARTMENT: PTP or PCW

DATE PREPARED: August, 2006

SUPERVISOR: Lead Operator

SUMMARY

The incumbent is responsible to perform assigned duties to assure proper operation and maintenance of plant and equipment.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

1. Read meters, maintain records and reports, update charts as indicated.
2. Inspect pumps and equipment for defects.
3. Repair defective pumps and equipment using appropriate tools.
4. Perform laboratory analysis in regard to operational aspects of plant.
5. Maintain proper level of chemicals.
6. Assist with maintenance of plant buildings and grounds.
7. Assist lab in samples as needed.
8. Perform inventory of reserve chemicals.
9. Monitor levels as various locations.
10. Receive emergency calls and dispatch appropriate personnel.
11. Perform other related duties as required or assigned.

Budget Responsibility:

\$ N/A Annual dollars

Facilities and Equipment Responsibility:

\$ 5 MM Total value

EDUCATION AND EXPERIENCE

High school diploma or GED and two years of related experience and/or training; or equivalent combination of education and experience.

LANGUAGE SKILLS

Ability to read and interpret documents such as safety rules, operating and maintenance instructions, and procedure manuals. Ability to write routine reports and correspondence. Ability to speak effectively before groups of customers or employees of organization.

MATHEMATICAL SKILLS

Ability to calculate figures and amounts such as discounts, interest, commissions, proportions, percentages, area, circumference, and volume. Ability to apply concepts of basic algebra and geometry.

REASONING ABILITY

Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret a variety of instructions furnished in written, oral, diagram, or schedule form.

CERTIFICATES, LICENSES, REGISTRATIONS

Must possess a valid Class II Treatment License.

INTERNAL COMMUNICATIONS

Regular contacts within the department and with other departments as needed.

EXTERNAL COMMUNICATIONS

Regular contacts with vendors and utility companies.

USE OF EQUIPMENT AND/OR COMPUTERS

Must be proficient in the use of a personal computer, various associated software programs, water testing equipment, LMI pumps, weed eater, lawn mower, case un-loader, truck buffer, broom, hand tools, analytical equipment, PH meter, Cl2 analyzers, autocon telemetry, pumps, SCADA equipment and standard office equipment.

OTHER SKILLS AND ABILITIES

Ability to utilize both internal and external resources to obtain information and data necessary to carry out routine assignments and special projects. Must have ability to establish and maintain effective working relationships with management and staff.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions and expectations.

While performing the functions of this job, the employee is regularly required to talk or hear. The employee frequently is required to stand, walk, and sit. The employee is occasionally required to use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; and taste or smell. The employee must regularly lift and/or move more than 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the functions of this job, the employee is occasionally exposed to wet/and or humid conditions; moving mechanical parts; high, precarious places, fumes or airborne particles; toxic or caustic chemicals; outside weather conditions and risk of electrical shock.

The noise level in the work environment is usually loud.



CITY CORPORATION
Position Description

POSITION TITLE: WW Operator III

Exempt (Y/N): No
DATE PREPARED: August, 2006

DEPARTMENT: PTP or PCW
SUPERVISOR: Lead Operator

SUMMARY

The incumbent is responsible to provide daily work leadership in order to assure proper operation and maintenance of plant and equipment.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

1. Provide leadership and supervision to all subordinate personnel.
2. Read meters, maintain records and reports, update charts as indicated.
3. Inspect pumps and equipment for defects.
4. Repair defective pumps and equipment using appropriate tools.
5. Perform laboratory analysis in regard to operational aspects of plant.
6. Maintain proper level of chemicals.
7. Assist with maintenance of plant buildings and grounds.
8. Assist lab in samples as needed.
9. Perform inventory of reserve chemicals.
10. Monitor levels as various locations.
11. Receive emergency calls and dispatch appropriate personnel.

12. Conduct safety training.
13. Replace monitoring charts.
14. Perform other related duties as required or assigned.

Budget Responsibility: \$ N/A Annual dollars
Facilities and Equipment Responsibility: \$ 10MM Total value

EDUCATION AND EXPERIENCE

High school diploma or GED plus additional college courses/training and two years of related experience and/or training; or equivalent combination of education and experience and 7-11 months management experience.

LANGUAGE SKILLS

Ability to read and interpret documents such as safety rules, operating and maintenance instructions; and procedure manuals. Ability to write routine reports and correspondence. Ability to speak effectively before groups of customers or employees of organization.

MATHEMATICAL SKILLS

Ability to calculate figures and amounts such as discounts, interest, commissions, proportions, percentages, area, circumference, and volume. Ability to apply concepts of basic algebra and geometry.

REASONING ABILITY

Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret a variety of instructions furnished in written, oral, diagram, or schedule form.

CERTIFICATES, LICENSES, REGISTRATIONS

Must possess a valid Class III Treatment License.

INTERNAL COMMUNICATIONS

Regular contacts within the department and with other departments as needed.

EXTERNAL COMMUNICATIONS

Regular contacts with vendors and utility companies.

USE OF EQUIPMENT AND/OR COMPUTERS

Must be proficient in the use of a personal computer, various associated software programs, water testing equipment, LMI pumps, weed eater, lawn mower, case un-loader, truck buffer, broom, hand tools, analytical equipment, PH meter, Cl2 analyzers, autocon telemetry, pumps, SCADA equipment and standard office equipment.

OTHER SKILLS AND ABILITIES

Ability to utilize both internal and external resources to obtain information and data necessary to carry out routine assignments and special projects. Must have ability to establish and maintain effective working relationships with management and staff.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions and expectations.

While performing the functions of this job, the employee is regularly required to talk or hear. The employee frequently is required to stand, walk, and sit. The employee is occasionally required to use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; and taste or smell. The employee must regularly lift and/or move more than 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

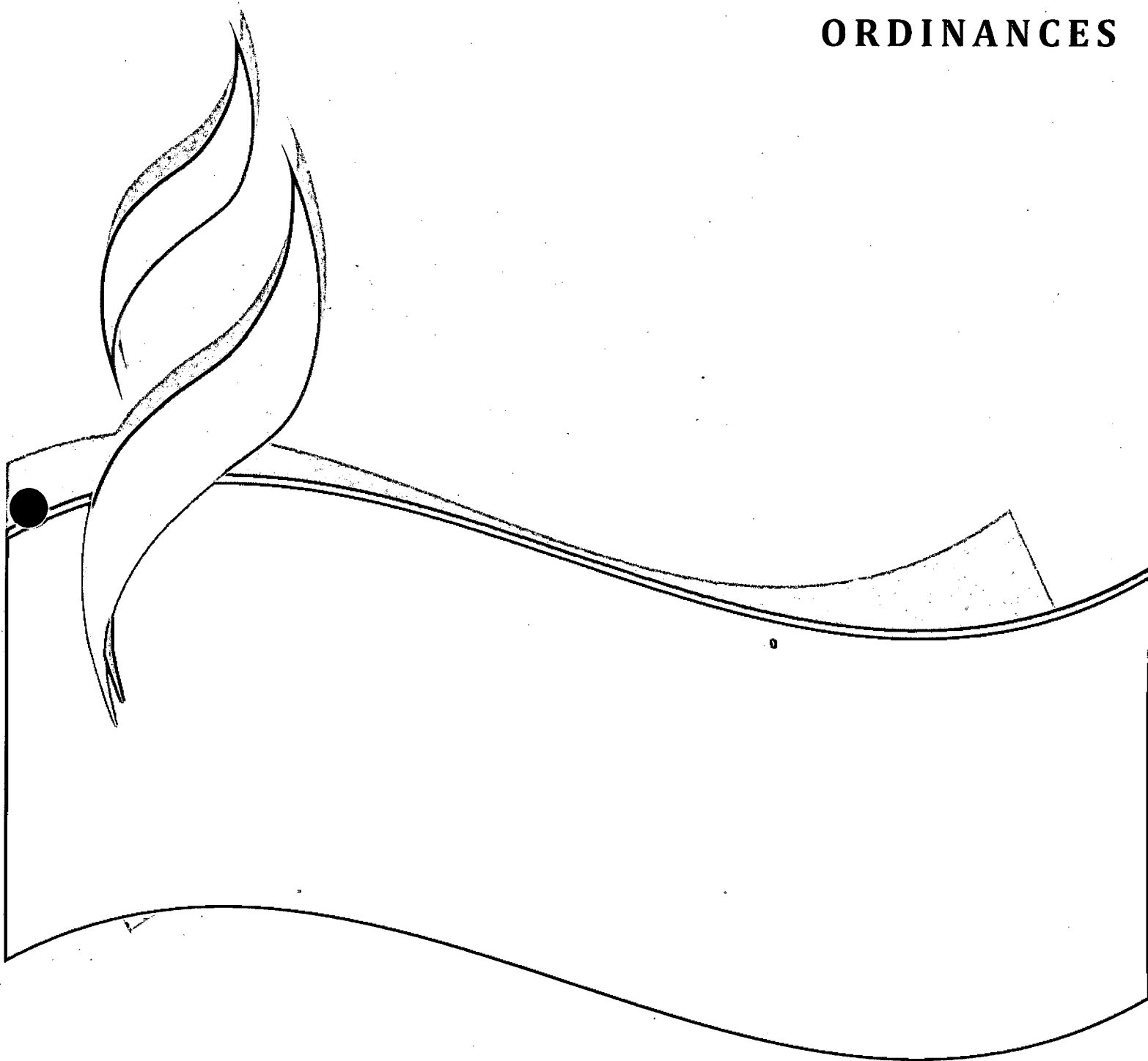
WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the functions of this job, the employee is occasionally exposed to wet/and or humid conditions, moving mechanical parts; high, precarious places, fumes or airborne particles; toxic or caustic chemicals; outside weather conditions and risk of electrical shock.

The noise level in the work environment is usually loud.

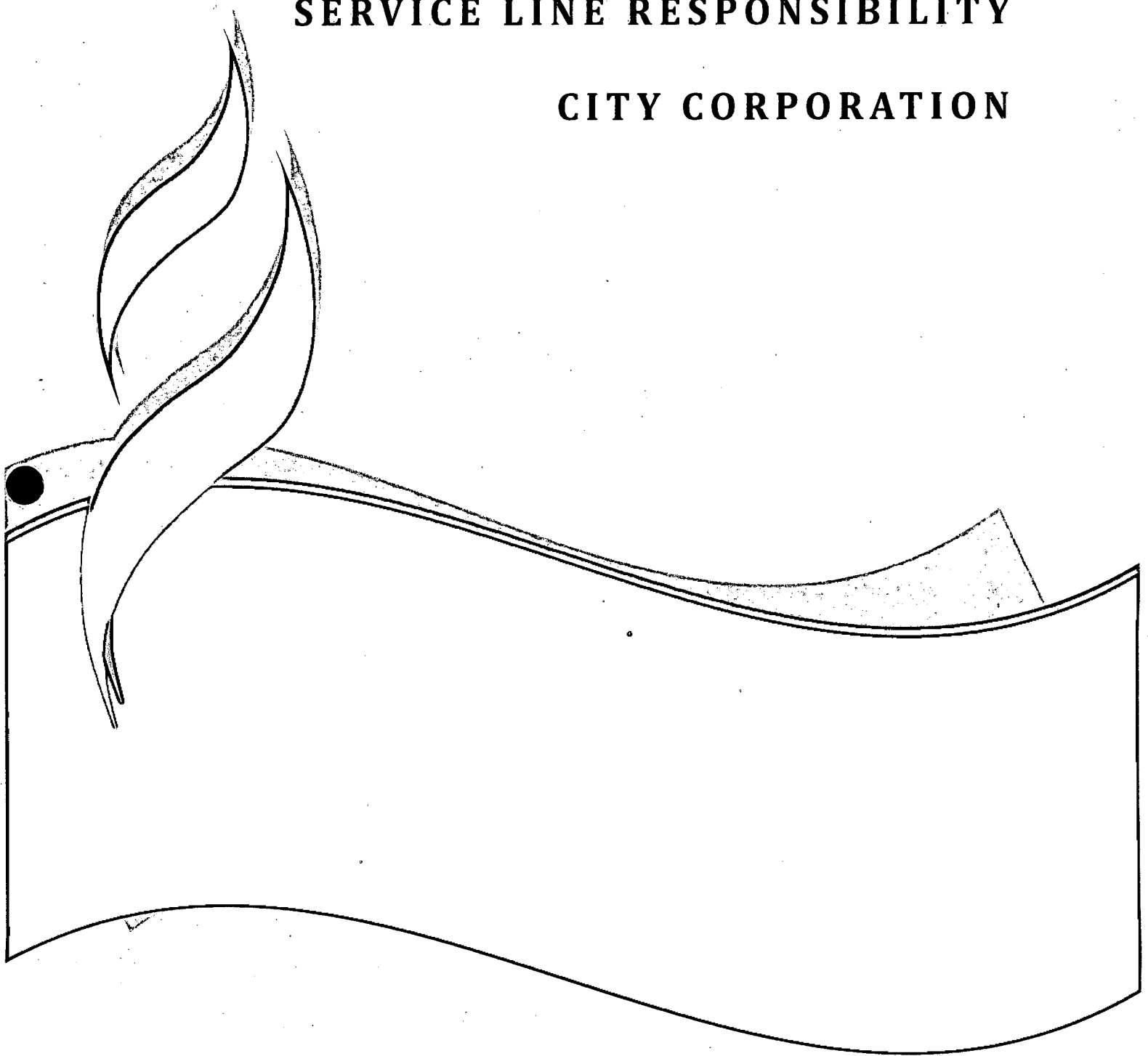
APPENDIX D
ORDINANCES



976-AMENDED

SERVICE LINE RESPONSIBILITY

CITY CORPORATION



ORDINANCE NO. 976

An Ordinance amending Ordinance No. 973 of the City of Russellville, Arkansas, and for other purposes,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF RUSSELLVILLE, ARKANSAS, that Section 1 of Ordinance No. 973 is hereby amended to read as follows:

"Section 1. Hereafter the fee for connecting new service lines for the City of Russellville Sanitary Sewer shall be One Hundred Fifty and No/100 Dollars (\$150.00) inside the City limits of the City of Russellville, Arkansas, and Two Hundred Twenty-Five and N City of Russellville, Arkansas."

~~SECTION 2~~ that Section 6 of Ordinance No. 973 is hereby amended to read as follows:

~~It will be the property owner's responsibility to maintain the house sewer service line from the dwelling to the owner's property line. Also, the property owner will be responsible for the clean out of any stoppage of the sewer service line from the sewer main to the dwelling or other types of structures. The Sewer Department will be responsible for repairs of sewer service line from main to edge of the street. In the event of new construction, where it is necessary to cross the street with the house service line the property owner shall notify the Russellville Sewer Department and the Russellville Sewer Department shall give an estimate of cost to the property owner and upon the deposit of said estimate with the Russellville Sewer Department, the Russellville Sewer Department will proceed to extend the sewer service from main to customers property line according to Sewer Department specifications. Upon the completion of the line, should the estimate be too high the balance will be refunded to the property owner, and should the estimate be too low the property owner shall reimburse the City of Russellville Sewer Department.~~

SECTION 3 that Section 7 of Ordinance No. 973 is hereby amended to read as follows"

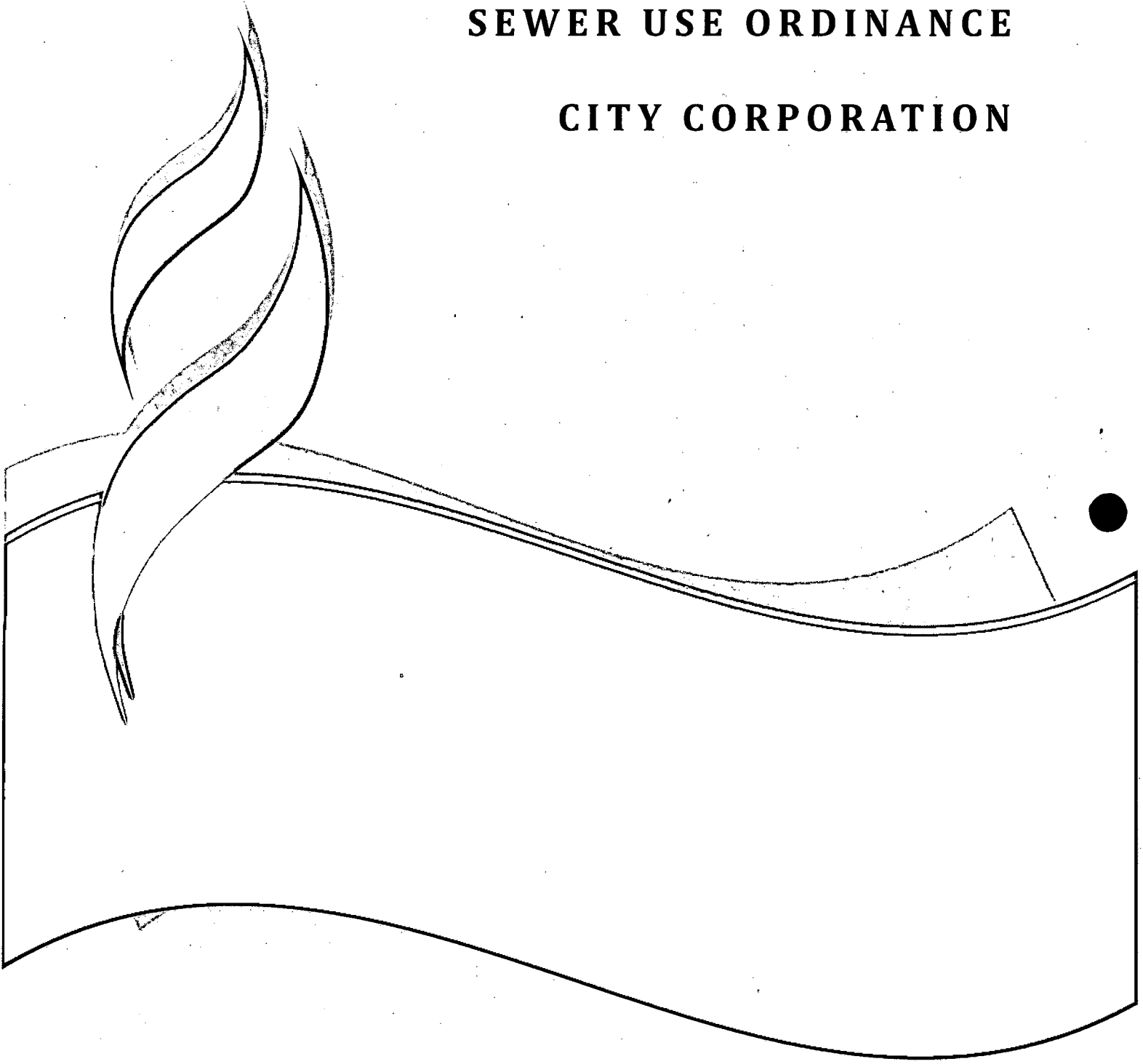
~~SECTION 7~~ From and after the passage of this Ordinance all house sewer service lines shall be of Vitrified Clay Pipe, extra strength ASTM C700 with ASTM C425 factory molded polyurethane joints; Cast Iron Soil Pipe, ASTM A74-75 or CISPI 301-72; or Schedule 40 ABS or PVC Plastic DWV Pipe.

SECTION 4. In the event any lot or group of lots are subdivided to create an additional building site or sites, then said subdivider shall install a sewer tap on the sewer building site or sites.

1075

SEWER USE ORDINANCE

CITY CORPORATION



ORDINANCE NO. 1075

AN ORDINANCE REGULATING THE USE OF PUBLIC AND PRIVATE SEWERS AND DRAINS, PRIVATE SEWAGE DISPOSAL, THE INSTALLATION AND CONNECTION OF BUILDING SEWERS, AND THE DISCHARGE OF WATERS AND WASTES INTO THE PUBLIC SEWER SYSTEM; AND PROVIDING PENALTIES FOR VIOLATIONS THEREOF; IN THE CITY OF RUSSELLVILLE, COUNTY OF POPE, STATE OF ARKANSAS.

PREAMBLE

Whereas the City of Russellville, State of Arkansas wishes to provide for the maximum possible beneficial public use of the City's facilities through adequate regulation of sewer construction, sewer use and industrial waste water discharges, and to provide procedures for complying with requirements placed upon the City by other regulatory bodies, it is hereby ordained and enacted by the City Council of the City of Russellville, State of Arkansas, as follows:

ARTICLE I

Unless the context specifically indicates otherwise, the meaning of terms used in this ordinance shall be as follows:

Sec. 1: BOD (denoting Biochemical Oxygen Demand) shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days at 20C, expressed in milligrams per liter.

Sec. 2: Building Drain shall mean that part of the lowest horizontal piping of a drainage system which receives the discharge from soil, waste, and other drainage pipes inside the walls of the building and conveys it to the building sewer, beginning five (5) feet (1.5 meters) outside the inner face of the building wall.

Sec. 3: Building Sewer shall mean the extension from the building drain to the public sewer or other place of disposal.

Sec. 4: Combined Sewer shall mean a sewer receiving both surface runoff and sewage.

Sec. 5: Garbage shall mean solid wastes from the domestic and commercial preparation, cooking, and dispensing of food, and from the handling, storage, and sale of produce.

Sec. 6: Industrial Wastes shall mean the liquid wastes from industrial manufacturing processes, trade, or business as distinct from sanitary sewage.

Sec. 7: Major Contributing Industry shall mean a nonresidential user that: (a) has a flow of 25,000 gallons or more per average work day; or (b) has a flow greater than 5 percent of the flow carried by the sewer system; or (c) has in its waste, a toxic pollutant; or (d) discharges wastewater that is found by the Superintendent, or the NPDES permit issuance authority in connection with the issuance of a NPDES permit to the public wastewater treatment system receiving the waste, to have significant impact, either singly or in combination with other contributing industries, on the wastewater treatment system or upon the quality of effluent therefrom.

Sec. 8: Natural Outlet shall mean any outlet into a watercourse, pond, ditch, lake, or other body of surface or groundwater.

Sec. 9: Person shall mean any individual, firm, company, association, society, corporation, group, partnership, copartnership, joint stock company, trust, estate, governmental entity or any other legal entity, or their legal representatives, agents or assigns. The masculine gender shall include the feminine. The singular shall include the plural where indicated by the context.

Sec. 10: pH shall mean the logarithm of the reciprocal of the weight of hydrogen ions in grams per liter of solution.

Sec. 11: Properly Shredded Garbage shall mean the wastes from the preparation, cooking, and dispensing of food that have been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in public sewers, with no particle greater than one-half ($\frac{1}{2}$) inch (1.27 centimeters) in any dimension.

Sec. 12: Public Sewer shall mean a sewer in which all owners of abutting properties have equal rights, and is controlled by public authority.

Sec. 13: Sanitary Sewer shall mean a sewer which carries sewage and to which storm, surface, and groundwaters are not intentionally admitted.

Sec. 14: Sewage shall mean a combination of the watercarried wastes from residences, business buildings, institutions, and industrial establishments, together with such ground, surface, and stormwaters as may be present.

Sec. 15: Sewage Treatment Plant shall mean any arrangement of devices and structures used for treating sewage.

Sec. 16: Sewage Works shall mean all facilities for collecting, pumping, treating, and disposing of sewage.

Sec. 17: Sewer shall mean a pipe or conduit for carrying sewage.

Sec. 18: Shall is mandatory; May is permissive.

Sec. 19: Slug shall mean any discharge of water, sewage, or industrial waste which in concentration of any given constituent or in quantity of flow exceeds for any period of duration longer than fifteen (15) minutes more than five (5) times the average twenty-four hour concentration or flows during normal operation.

Sec. 20: Storm Drain (sometimes termed storm sewer) shall mean a sewer which carries storm and surface waters and drainage, but excludes sewage and industrial wastes, other than unpolluted cooling water.

Sec. 21: Superintendent shall mean the Superintendent of Sewage Works and/or Water Pollution Control of the City of Russellville, or his authorized deputy, agent, or representative.

Sec. 22: Suspended Solids shall mean solids that either float on the surface of, or are in suspension in water, sewage, or other liquids, and which are removable by laboratory filtering.

Sec. 23: Watercourse shall mean a channel in which a flow of water occurs, either continuously or intermittently.

Sec. 24: Normal Domestic Sewage shall mean sewage which, when analyzed, shows by weight a daily average of not more than 350 parts per million of suspended solids and/or not more than 350 parts per million BOD.

Sec. 25: User shall mean any user who discharges an effluent into the City of Russellvilles Sewage Treatment Plant by means of pipes, conduits, pumping stations, force mains, constructed drainage ditches, intercepting ditches, and all constructed devices and appliances appurtenant thereto.

Sec. 26: Categorical Pretreatment Standards shall mean the National Pretreatment Standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged or introduced into a POTW by specific Industrial Dischargers.

Sec. 27: Act shall mean the Clean Water Act (33 U.S.C. 1251 et seq), as amended.

Sec. 28: City shall mean the City of Russellville, Arkansas, the local governmental entity enacting and enforcing this Ordinance.

Sec. 29: Permit is defined as set forth in Articles IV and VIII of this Ordinance.

ARTICLE II

Sec. 1: It shall be unlawful for any person to place, deposit, or permit to be deposited in any unsanitary manner on public or private property within the City of Russellville, or in any area under the jurisdiction of said City, and human or animal excrement, garbage, or other objectionable waste.

Sec. 2: It shall be unlawful to discharge to any natural outlet within the City of Russellville, or in any area under the jurisdiction of said City, any sewage or other polluted waters, except where suitable treatment has been provided in accordance with subsequent provisions of this ordinance.

Sec. 3: Except as hereinafter provided, it shall be unlawful to construct or maintain any privy, privy vault,

septic tank, cesspool, or other facility intended or used for the disposal of sewage.

Sec. 4: The owner of all houses, buildings, or properties used for human occupancy, employment, recreation, or other purposes, situated within the City and abutting on any street, alley, or right-of-way in which there is now located or may in the future be located a public sanitary or combined sewer of the City, is hereby required at his expense to install suitable toilet facilities therein, and to connect such facilities directly with the proper public sewer in accordance with the provisions of this ordinance, within ninety (90) days after date of official notice to do so, provided that said public sewer is within one hundred (100) feet (30.5 meters) of the property line.

ARTICLE III

Sec. 1: Where a public sanitary or combined sewer is not available under the provisions of Article II, Section 4, the building sewer shall be connected to a private sewage disposal system complying with the provisions of this article.

Sec. 2: Before commencement of construction of a private sewage disposal system the owner shall first obtain a written permit signed by the Superintendent. The application for such permit shall be made on a form furnished by the City, which the applicant shall supplement by any plans, specifications, and other information as are deemed necessary by the Superintendent. A permit and inspection fee of \$10.00 dollars shall be paid to the City at the time the application is filed.

Sec. 3: A permit for a private sewage disposal system shall not become effective until the installation is completed to the satisfaction of the Superintendent. He shall be allowed to inspect the work at any stage of construction and, in any event, the applicant for the permit shall notify the Superintendent when the work is ready for final inspection and before any underground portions are covered. The inspection shall be made within twenty-four (24) hours of the receipt of notice by the Superintendent.

Sec. 4: The type, capacities, location, and layout of a private sewage disposal system shall comply with all recommendations of the Department of Public Health of the State of Arkansas. No permit shall be issued for any

private sewage disposal system employing subsurface soil absorption facilities share the area of the lot is less than 15,000 square feet (1,394 square meters). No septic tank or cesspool shall be permitted to discharge to any natural outlet.

Sec. 5: At such time as a public sewer becomes available to a property served by a private sewage disposal system, as provided in Article III, Section 4, a direct connection shall be made to the public sewer in compliance with this ordinance; and any septic tanks, cesspools, and similar private sewage disposal facilities shall be abandoned and filled with suitable material.

Sec. 6: The owner shall operate and maintain the private sewage disposal facilities in a sanitary manner at all times; at no expense to the City.

Sec. 7: No statement contained in this article shall be construed to interfere with any additional requirements that may be imposed by the Health Officer.

Sec. 8: When a public sewer becomes available, the building sewer shall be connected to said sewer within sixty (60) days and the private sewage disposal system shall be cleaned of sludge and filled with clean bank-run gravel or dirt.

ARTICLE IV

Sec. 1: No authorized person shall uncover, make any connections with or opening into, use, alter, or disturb any public sewer or appurtenance thereof without first obtaining a written permit from the Superintendent.

Sec. 2: There shall be two (2) classes of building sewer permits: (a) for residential and commercial service, and (b) for service to establishments producing industrial wastes. In either case, the owner or his agent shall make application on a special form furnished by the City. The permit application shall be supplemented by any plans, specifications, or other information considered pertinent in the judgement of the Superintendent. A permit and inspection fee of \$150.00 dollars for a residential or commercial building sewer permit and \$500.00 dollars for an industrial building sewer permit shall be paid to the City at the time the application is filed.

Sec. 3: All costs and expense incident to the installation and connection of the building sewer shall be borne by the owner. The owner shall indemnify the City from any loss or damage that may directly or indirectly be occasioned by the installation of the building sewer.

Sec. 4: A separate and independent building sewer shall be provided for every building; except where one building stands at the rear of another on an interior lot and no private sewer is available or can be constructed to the rear building through an adjoining alley, court, yard, or driveway, the building sewer from the front building may be extended to the rear building and the whole considered as one building sewer.

Sec. 5: Old building sewers may be used in connection with new buildings only when they are found, on examination and test by the Superintendent, to meet all requirements of this ordinance.

Sec. 6: The size, slope, alignment, materials of construction of a building sewer, and the methods to be used in excavating, placing of the pipe, jointing, testing, and backfilling the trench, shall all conform to the requirements of the building and plumbing code or other applicable rules and regulations of the City. In the absence of code provisions or in amplification thereof, the materials and procedures set forth in appropriate specifications of the A.S.T.M. and W.P.C.F. Manual of Practice No. 9 shall apply.

Sec. 7: Whenever possible, the building sewer shall be brought to the building at an elevation below the basement floor. In all buildings in which any building drain is too low to permit gravity flow to the public sewer, sanitary sewage carried by such building drain shall be lifted by an approved means and discharged to the building sewer.

Sec. 8: No person shall make connection of roof down spouts, exterior foundation drains, areaway drains, or other sources of surface runoff or groundwater to a building sewer or building drain which in turn is connected directly or indirectly to a public sanitary sewer.

Sec. 9: The connection of the building sewer into the public sewer shall conform to the requirements of the building and plumbing code or other applicable rules and

regulations of the City, or the procedures set forth in appropriate specifications of the A.S.T.M. and the W.P.C.F. Manual of Practice No. 9. All such connections shall be made gas tight and watertight. Any deviation from the prescribed procedures and materials must be approved by the Superintendent before installation. Sec. 10: The applicant for the building sewer permit shall notify the Superintendent when the building sewer is ready for inspection and connection to the public sewer. The connection shall be made under the supervision of the Superintendent or his representative.

Sec. 11: All excavations for building sewer installation shall be adequately guarded with barricades and lights so as to protect the public from hazard. Streets, sidewalks, parkways, and other public property disturbed in the course of the work shall be restored in a manner satisfactory to the City.

ARTICLE V

Sec. 1: No person shall discharge or cause to be discharged any stormwater, surface water, groundwater, roof runoff, subsurface drainage, uncontaminated cooling water, or unpolluted industrial process waters to any sanitary sewer.

Sec. 2: Stormwater and all other unpolluted drainage shall be discharged to such sewers as are specifically designated as combined sewers or storm sewers, or to a natural outlet approved by the Superintendent. Industrial cooling water or unpolluted process waters may be discharged, on approval of the Superintendent, to a storm sewer, combined sewer, or natural outlet.

Sec. 3: No person shall discharge or cause to be discharged any of the following described waters or wastes to any public sewers: (a) Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid, or gas. (b) Any waters or wastes containing toxic or poisonous solids, liquied, or gases in sufficient quantity either singly or by interaction with other wastes, to injure or interfere with any sewage treatment process, constitute a hazard to humans or animals, create a public nuisance, or create any hazard in the receiving waters of the sewage treatment plant.

(c) Any waters or wastes having a pH lower than 6.0 or higher than 9.0, or having any othe rcorrosive property

capable of causing damage or hazard to structures, equipment and personnel of the sewage works.

(d) Solid or viscous substances in quantities or of such size capable of causing obstruction to the flow in sewers, or other interference with the proper operation of the sewage works such as, but not limited to, ashes, ciners, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, unground garbage, whole blood, paunch manure, hair and fleshings, entrails and paper dishes, cups, milk containers, etc. either whole or ground by garbage grinders.

Sec. 4: No person shall discharge or cause to be discharged the following described substances, materials, waters, or wastes if it appears likely in the opinion of the Superintendent that such wastes can harm either the sewers, sewage treatment process, or equipment, have an adverse effect on the receiving stream, or can otherwise endanger life, limb, public property, or constitute a nuisance. In forming his opinion as to the acceptability of these wastes, the Superintendent will give consideration to such factors as the quantities of subject wastes in relation to flows and velocities in the sewers, materials of construction of the sewers, nature of the sewage treatment process, capacity of the sewage treatment plant, degree of treatability of wastes in the sewage treatment plant, and other pertinent factors. The substances prohibited are:

(a) Any wastewater having a temperature which will inhibit biological activity in the POTW pretreatment plant resulting in interference, but in no case wastewater with a temperature at the introduction into the POTW which exceeds 40C (104F) unless the POTW treatment plant is designed to accommodate such temperature.

(b) Any water or waste containing fats, wax, grease, or oils, whether emulsified or not, in excess of one hundred (100) mg/l or containing substances which may solidify or become viscous at temperatures between thirty-two (32) and one hundred fifty (150)F (0 and 65C).

(c) Any garbage that has not been properly shredded. The installation and operation of any garbage grinder equipped with a motor of three-fourths (3/4) horsepower (0.76 hp metric) or greater shall be subject to the review and approval of the Superintendent.

(d) Any waters or wastes containing strong acid iron pickling wastes, or concentrated plating solutions whether neutralized or not.

(e) Any waters or wastes containing toxic materials or

heavy metals in concentrations exceeding the following limits:

Element	mg/l
Arsenic	0.05
Barium	5.0
Boron	1.0
Cadmium	0.02
Chromium	0.5
Copper	0.2
Lead	0.1
Manganese	1.0
Mercury	0.005
Nickel	0.8
Selenium	0.02
Silver	0.1
Zinc	0.05
Cyanide	0.05

In addition, waters or wastes containing any measurable trace of the following:

Antimony	Rhenuim
Beryllium	Strontium
Bismuth	Tellurium
Cobalt	Pesticides
Molybdenum	Herbicides
Tin	Fungicides
	Uranylion

(f) Any waters or wastes containing phenols or other taste or odor-producing substances, in such concentrations exceeding limits which may be established by the Superintendent as necessary, after treatment of the composite sewage, to meet the requirements of the State, Federal or other public agencies of jurisdiction for such discharge to the receiving waters.

(g) Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the Superintendent in compliance with applicable State or Federal regulations.

(h) Deleted

(I) Materials which exert or cause:

(1) unusual concentrations of inert suspended solids (such as, but not limited to, Fullers earth,

lime slurries, and lime residues) or of dissolved solids (such as, but not limited to, sodium chloride and sodium sulfate).

(2) Excessive discoloration (such as, but not limited to, dye wastes and vegetable tanning solutions).

(3) Unusual BOD, chemical oxygen demand, or chlorine requirements in such quantities as to constitute a significant load on the sewage treatment works.

(4) Unusual volume of flow or concentration of wastes constituting slugs as defined herein.

(j) Waters or wastes containing substances which are not amenable to treatment or reduction by the sewage treatment processes employed, or are amenable to treatment only to such degree that the sewage treatment plant effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters.

Section 5: If any waters or wastes are discharged, or are proposed to be discharged to the public sewers, which waters contain the substances or possess the characteristics enumerated in Section 4 of this Article, and which in the judgement of the Superintendent, may have a deleterious effect upon the sewage works, processes, equipment, or receiving waters, or which otherwise create a hazard to life or constitute a public nuisance, the Superintendent may:

(a) Reject the wastes,

(b) Require pretreatment to an acceptable condition for discharge to the public sewers,

(c) Require control over the quantities and rates of discharge, and/or

(d) Require payment to cover the added cost of handling and treating the wastes not covered by existing taxes or sewer charges under the provisions of Section 10 of this article.

If the Superintendent permits the pretreatment of equalization of waste flows, the design and installation of the plants and equipment shall be subject to the review and approval of the Superintendent, and subject to the requirements of all applicable codes, ordinances, and laws.

Sec. 6: Grease, oil, and sand interceptors shall be provided when, in the opinion of the Superintendent, they are necessary for the proper handling of liquid wastes

containing grease in excessive amounts, or any flammable wastes, sand, or other harmful ingredients; except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the Superintendent, and shall be located as to be readily and easily accessible for cleaning and inspection.

Sec. 7: Where preliminary treatment or flow-equalizing facilities are provided for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation by the owner at his expense.

Sec. 8: When required by the Superintendent, the owner of any property serviced by a building sewer carrying industrial wastes shall install a suitable control manhole in the building sewer and/or other monitoring facilities together with such necessary meters and other appurtenances to facilitate observation, sampling, and measurement of the wastes. Such facilities, when required, shall be accessibly and safely located, and shall be constructed in accordance with plans approved by the Superintendent. The facilities shall be installed by the owner at his expense, and shall be maintained by him so as to be safe and accessible at all times.

Sec. 9: All measurements, tests, and analyses of the characteristics of waters and wastes to which reference is made in this ordinance shall be determined in accordance with the latest edition of Standard Methods for the Examination of Water and Wastewater, published by the American Public Health Association, and shall be determined at the control manhole or monitoring facility provided, or upon suitable samples taken at said control manhole or monitoring facility has been required, the control manhole shall be considered to be the nearest downstream manhole in the public sewer to the point at which the building sewer is connected. Sampling shall be carried out by customarily accepted methods to reflect the effect of constituents upon the sewage works and to determine the existence of hazards to life, limb, and property. (The particular analyses involved will determine whether a twenty-four (24) hour composite of all out falls of a premise in appropriate or whether a grab sample or samples should be taken. Normally, but not always, BOD and suspended solids analyses are obtained from 24-hr composites of all out falls whereas pHs are determined from periodic grab samples.

Sec. 10: National categorical pretreatment standards as promulgated by the U.S. Environmental Protection Agency (EPA) pursuant to the Act shall be met by all Industrial Users of the regulated industrial categories. An application for modification of the national categorical pretreatment standards may be considered for submittal to the Regional Administrator by the Superintendent, when the wastewater treatment systems achieves consistent removal of the pollutants as defined by 40 CFR 403.7. State requirements and limitations on discharge to the Publicly Owned Treatment Works (POTW) shall be met by all Industrial Users which are subject to such standards in any instance in which they are more stringent than federal requirements and limitations or those in this or any other applicable ordinance.

Sec. 11: No statement contained in this ordinance shall be construed as preventing any special agreement or arrangement between the city and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the City for treatment, subject to payment therefore, by the industrial concern, provided that the industrial concern continues to comply with all applicable State and Federal requirements and standards.

ARTICLE VI

Sec. 1: No person shall maliciously, willfully, or negligently break, damage, destroy, uncover, deface, or tamper with any structure, appurtenance, or equipment which is a part of the sewage works. Any person, violating this provision shall be subject to immediate arrest under charge of disorderly conduct.

ARTICLE VII

Sec. 1: The Superintendent and other duly authorized employees of the City bearing proper credentials and identification shall be permitted to enter all properties at all reasonable times for the purpose of inspection, observation, measurement, sampling, testing and the performance of their duties, including inspection of all records maintained, in accordance with the provisions of this ordinance. The Superintendent or his representatives shall have no authority to inquire into any processes including metallurgical, chemical, oil, refining, ceramic,

paper, or other industries beyond that point having a direct bearing on the kind and source of discharge to the sewers or waterways or facilities for waste treatment. However the Superintendent or his representative shall have the right to set up on the users property such devices as are necessary to conduct sampling or metering operations. When such a user shall make necessary arrangements so that upon presentation of suitable identification, the Superintendent or his representative will be permitted to enter without delay for the purpose of performing their specific responsibilities.

Sec. 2: While performing the necessary work on private properties referred to in Article VII, Section 1 above, the Superintendent or duly authorized employees of the City shall observe all safety rules applicable to the premises established by the company and the company shall be held harmless for injury or death to the City employees and the City shall indemnify the company against loss or damage to its property by City employees and against liability claims and demands for personal injury or property damage asserted against the company and growing out of the gauging and sampling operation, except as such may be caused by negligence or failure of the company to maintain safe conditions as required in Article V, Section B.

Sec. 3: The Superintendent and other duly authorized employees of the City bearing proper credentials and identification shall be permitted to enter all private properties through which the City holds a duly negotiated easement for the purposes of, but not limited to, inspection, observation, measurement, sampling, repair, and maintenance of any portion of the sewage works lying within said easement. All entry and subsequent work, if any, on said easement, shall be done in full accordance with the terms of the duly negotiated easement pertaining to the private property involved.

Sec. 4: Information and data on a user obtained from applications, permits, monitoring programs and inspections shall be available to the public or any government agency without restriction unless the user specifically requests and is able to demonstrate to the satisfaction of the Superintendent that the release of such information would divulge information, processes or methods of production entitled to protection as trade secrets. When requested by the person furnishing a report, and until such time as the

information is determined not to be confidential, the portions of a report which might disclose trade secrets or secret processes shall not be made available for inspection by the public but shall be made available upon written request to governmental agencies for uses related to this ordinance and/or pretreatment programs; provided that, such portions of a report shall be available for use by the City or any City agency in judicial review or enforcement proceedings involving the person furnishing the report. Wastewater constituents and characteristics shall not be recognized as confidential information. Information accepted by the Superintendent as confidential shall not be transmitted to any governmental agency by the superintendent until and unless a ten (10) day notification is given to the person furnishing the information.

ARTICLE VIII

Sec. 1: A permit issued under Article IV of this ordinance to a major contributing industry shall be subject to all the provisions of this ordinance and in addition such a permit may contain any or all of the following:

- (a) The average and maximum wastewater constituents and characteristics.
- (b) Limits on rate and time of discharge and requirements for flow regulations and equalization.
- (c) Requirements for installation of inspection and monitoring facilities.
- (d) Pretreatment requirements.
- (e) Specifications for monitoring programs which may include sampling, number, types and standards for tests and reporting schedule.
- (f) Compliance schedules.
- (g) Requirements for notification to and acceptance by the Superintendent of any new introduction of wastewater constituents or of any substantial change in the volume or character of the wastewater constituents being introduced into the wastewater system.
- (h) Requirements for disposal of sludges, floats and skimmings.
- (i) Requirements for submission of technical reports or discharge reports, including frequency of submission.
- (j) Requirements for maintaining plant records relating to wastewater discharge as specified by the Superintendent.

and affording the Superintendent or his representative access thereto.

(k) Mean and maximum mass emission rates, or other appropriate limits when incompatible pollutants are proposed or present in the Major Contributing Industry's wastewater discharge.

(l) Additional requirement as determined by the Superintendent.

Section 2: Permits are issued to a specific user for a specific operation. Such a permit shall not be reassigned or transferred or sold to another owner, another user, or different premise, nor shall it be transferred to a new or significantly changed operation. At the time the Superintendent determines that a person qualifies as a Major Contributing Industry, the Superintendent shall order that person to obtain a permit of the type set forth in Section 1 of this Article. Major Contributing Industries shall complete and file with the Superintendent, a permit application therefor in the form prescribed by the Superintendent, and accompanied by the fee of \$200. Existing users shall apply for a permit within 60 days after the Superintendent's order. Proposed new Users who will be classified as Major Contributing Industries as defined in Article I of this ordinance shall apply at least 120 days prior to connecting to or contributing to the POTW. The Superintendent will evaluate the data furnished by a Major Contributing Industry and may require additional information. After evaluation and acceptance of the data furnished, the Superintendent will issue a Major Contributing Industry Wastewater Discharge Permit subject to terms and conditions provided herein.

Section 3: Any user who violates any section of this ordinance, or applicable State and/or Federal regulations, or any of the following conditions which are hereby made part of every permit, whether stated therein or not, is subject to having his permit revoked:

- (a) The user shall actually report the wastewater constituents and characteristics of his discharge.
- (b) The user shall report significant changes in operation, or in wastewater constituents and characteristics.
- (c) The user shall allow reasonable access to his premises for the purposes of inspection or monitoring.
- (d) The user shall comply with each and every term and

condition of the permit.

Sec. 4: The Superintendent shall be responsible for the enforcement of the provisions of this Article and shall have authority to serve notices of violations thereof, to issue orders and impose penalties as authorized therein, and to establish limits for the discharge of toxic or objectionable substances.

Sec. 5: Any person found to be violating any provision of this Article, Superintendents order, or condition of an industrial permit shall be served by the Superintendent or other agent of the City with written notice stating the nature of the violation. Within thirty (30) days after the date of the notice, unless a shorter time is necessary due to the nature of the violation, a description of successful corrective action taken or a plan for the satisfactory correction of the violation shall be submitted to the Superintendent. If the violation is not corrected by timely compliance, or a satisfactory correction plan submitted within the specified time, the Superintendent may order any user to show cause before him why enforcement action should not be taken. A written notice shall be served specifying the time and place of a hearing, the reason why the action is to be taken and the proposed enforcement action. The Superintendent may propose to take any enforcement action reasonably necessary to abate the violation, including termination of sewer service. Based upon the evidence presented at the hearing, the Superintendent shall determine the enforcement action which should be taken, if any. This determination may be appealed to a board or representative of the City designated to hear such appeals by filing a written petition with such board or representative within ten (10) days of the Superintendents ruling. The board or representative shall fix a reasonable time for hearing the appeal, at which the appelliant may be represented by counsel, and give written notice to the parties stating the time and place for the hearing. The board or representative shall decide the appeal within a reasonable time and notify the parties of its decision.

Sec. 6: The Superintendent may revoke any permit, or terminate or cause to be terminated wastewater treatment system service to any property, if a violation of any provision of this ordinance is found to exist or if a discharge of wastewater causes or threatens to cause a

condition of contamination, pollution, or nuisance as defined in this ordinance. This provision is in addition to any other provision set forth for violations of this ordinance.

Sec. 7: Users shall notify the Superintendent immediately of any discharges or highway spills of wastes in violation of this Ordinance to enable countermeasures to be taken by the City to minimize sewage to the wastewater treatment system and/or the receiving waters. This notification shall be followed, within 5 days of the date of occurrence, by a detailed written statement from the user describing the causes of the discharge and the measures being taken to prevent its future occurrence. Such notification will not relieve users of liability for any consequential expense, loss or damage to the wastewater treatment system or for any fines and/or penalties imposed on the City which result from the violative discharge. Users shall make available to their employees copies of this ordinance and together with such other wastewater information and notices which may be furnished by the Superintendent from time to time directed toward more effective waste pollution control. A notice shall be furnished and permanently posted by the user in a conspicuous place advising employees whom to call in case of any discharge in violation of this ordinance.

Sec. 8: When the Superintendent finds that a discharge of wastewater, in violation of this ordinance, or the provisions of a permit issued to a Major Contributing Industry, has taken place or threatens to take place, the Superintendent may issue an order to cease and desist, and direct that those persons not complying therewith shall:

- (a) Comply forthwith,
- (b) Comply in accordance with a time schedule set forth by the Superintendent, or
- (c) Take appropriate remedial or preventive action in the event of a threatened violation.

Sec. 9: When the City finds that a discharge of wastewater, in violation of this ordinance, or wastewater source control requirements, effluent limitations or pretreatment standards or the provisions of a permit, has been taking place, the Superintendent may require the user to submit for approval, with such modifications as the Superintendent deems necessary, a detailed time schedule of specific actions which the user shall take in order to prevent the

discharge or correct the violation of requirements resulting therefrom.

Sec. 10: Any person who violates any provision of this Article or any condition of a permit issued to a Major Contributing Industry, or who violates any cease and desist order, prohibition, effluent limitation, or pretreatment or toxicity standard, issued or established to implement this ordinance shall be liable civilly to a penalty not to exceed \$100 for individuals and \$100 for corporations. Each day in which a violation occurs shall be considered a separate violation. The Superintendent may assess a penalty of up to \$50 for each such violation and add such penalty to the users charges and fees. Such assessment shall be offset against any subsequent penalty otherwise imposed for the same violation. Civil penalties in excess of \$50 shall be assessed by Municipal Court. An such penalty imposed shall not be construed as liquidated damages, and shall accrue in addition to any liability for any consequential damages or additional operating expenses resulting from the violation for which the penalty is imposed. Consequential damages shall include but not be limited to, fines and penalties imposed upon the City by other public authorities.

Sec. 11: Any person who violates any provision of this Article or any condition of a permit issued to a Major Contributing industry, effluent limitation, or pretreatment or toxicity standard, issued or established to implement this ordinance shall be liable upon conviction to a sum not to exceed \$1,000 for each day in which such violation occurs, or to imprisonment for not more than 6 months, or both.

Sec. 12: All users subject to this ordinance shall retain and preserve for no less than three (3) years, any records, books, documents, memoranda, reports, correspondence and any and all summaries thereof, relating to monitoring, sampling and chemical analyses made by or in behalf of a user in connection with its discharge. All records which pertain to matters which are the subject of enforcement or litigation activities brought by the City shall be retained and preserved by the user until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

Sec. 13: Any person who knowingly makes any false statement, representation or certification in any application, record, report, plan or other document filed or required to be maintained pursuant to this Article, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method shall upon conviction be punished as provided in Section 11 of this Article.

Sec. 14: No user shall increase the use of process water or, in any way, attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with any local, state, or federal discharge standard.

Sec. 15: The City reserves the right to amend any permit issued hereunder in order to assure compliance by the City with applicable laws and regulations, to comply with modification with the limitations and requirements of Article V, or if other just cause exists. Within 180 days of the promulgation of a National Categorical Pretreatment Standard, all industrial Users subject to such standards shall submit to the City a baseline report as stipulated in Part 403.12(b) of the Federal Register. This report shall be in addition to any other reports, applications, or questionnaires required or previously submitted. Within 9 months of the promulgation of a National Categorical Pretreatment Standard, the permit of each industrial User subject to such standards shall be revised to require compliance with such standards within the time frame prescribed by such standards. All National Categorical Pretreatment Standards adopted after the promulgation of this Ordinance shall be adopted by the City as part of this Ordinance. Where an Industrial User, subject to a National Categorical Pretreatment Standard, has not previously submitted an application for a Major Contributing Industry Permit as required by Section 1 and 2 of this Article, the industrial user shall apply for a Major Contributing Industry Permit from the City within 60 days after the promulgation of the applicable National Categorical Pretreatment Standard by the U.S. EPA. The Industrial User shall be informed of any proposed changes in his permit at least 30 days prior to the effective date of change. Any changes or new conditions in the permit shall include a reasonable time schedule for compliance.

Sec. 16: All permits shall be issued for perpetual duration, subject to amendment or revocation as provided in this Ordinance. Under extraordinary circumstances, a permit may be issued for a stated period or may be stated to expire on a specific date.

Sec. 17: Major Contributing Industries are required to provide and operate at the Users own expense, a monitoring facility to allow inspection, sampling, and flow easurement of each sewer discharge to the City. Each monitoring facility shall be situated on the Users premises, except where such a location would be impractical or cause undue hardship on the User, the City may concur with the facility being constructed in the public street or sidewalk area providing that the facility is located so that it will not be obstructed by landscaping or parked vehicles. There shall be ample rom in or near such monitoring facility to allow accurate sampling and preparation of samples for analysis. The facility, sampling, and measuring equipment shall be maintained at all times in a safe and proper operating condition at the expense of the User. All monitoring facilities shall be constructed and maintained in accordance with all applicable local construction standards and specifications. Construction shall be completed within 120 days of receipt of a Major Contributing Industry Permit. The City may inspect the monitoring facilities of any User to determine complinace with the requirements of this Ordinance. The User shall allow the City or its representatives to enter upon the premises of the User at all reasonable hours, for the purposes of inspection, sampling, or records examination. The City shall have the right to set up on the Users property such devices as are necessary to conduct sampling, inspection, compliance monitoring, and/or metering operations.

ARTICLE IX

Sec. 1: Any person found to be violating any provision of this ordinance except Article VI and Article VIII shall be served by the City with written notice stating the nature of the violation and providing a reasonable time limit for the satisfactory correction thereof. The offender shall, within the eperiod of time stated in such notice, permanently cease all violations.

Sec. 2: (a) Any person who shall continue any violation beyond the time limit provided for in Article IX, Section 1, shall be guilty of a misdemeanor, and on conviction thereof shall be fined in the amount not exceeding Three Hundred Dollars (\$300) for each violation. Each day in which any such violator shall continue shall be deemed a separate offense.

(b) In the event the prescribed sewer service charge is declared delinquent and has not been paid in full within four (4) months of the initial due date, the City shall at its option disconnect the sanitary sewer from the sewer collection line. The location of the disconnect shall be at the discretion of the City. The sewer may be re-connected to the City's collection system by the affected property owner who shall bear the entire expense of all costs for the reconnect provided that the delinquent account has been paid in full and that the City has been reimbursed in full for all costs borne by the City resulting from the disconnecting of the sewer. Further the City shall have the option in addition to any penalties set forth in this Ordinance to disconnect the sewer for any violation of this Ordinance in the use of the sanitary sewer.

Sec. 3: Any person violating any of the provisions of this ordinance shall become liable to the City for any expense, enforcement cost, loss, or damage occasioned to the City by reason of such violation.

Sec. 4: A list of the users which were significantly violating provisions of this ordinance during the 12 previous months shall be annually published by the Superintendent in a local newspaper. The notification shall also summarize any enforcement action taken against the user during the same 12 months. For the purpose of this Section, significant violations are those violations which remain uncorrected beyond any time limit set for corrective action; which are part of a pattern of noncompliance over a 12 month period; or which involve a failure to accurately report noncompliance.

Sec. 5: Either as an alternative to any procedure established in this Ordinance or as an enforcement action thereunder, the Superintendent may seek injunctive relief to restrain the violation of, or attempted violation of, any provision of this ordinance.

ARTICLE X

Sec. 1: All ordinance or parts of ordinances in conflict herewith are hereby repealed.

Sec. 2: The invalidity of any section, clause, sentence, or provision of this ordinance shall not affect the validity of any other part of this ordinance which can be given effect without such invalid part or parts.

Sec. 3: The City reserves the right to amend the requirements set forth in this ordinance in any manner and to establish more stringent limitations or requirements where deemed necessary to comply with the objectives set forth in the Preamble to this ordinance.

ARTICLE XI

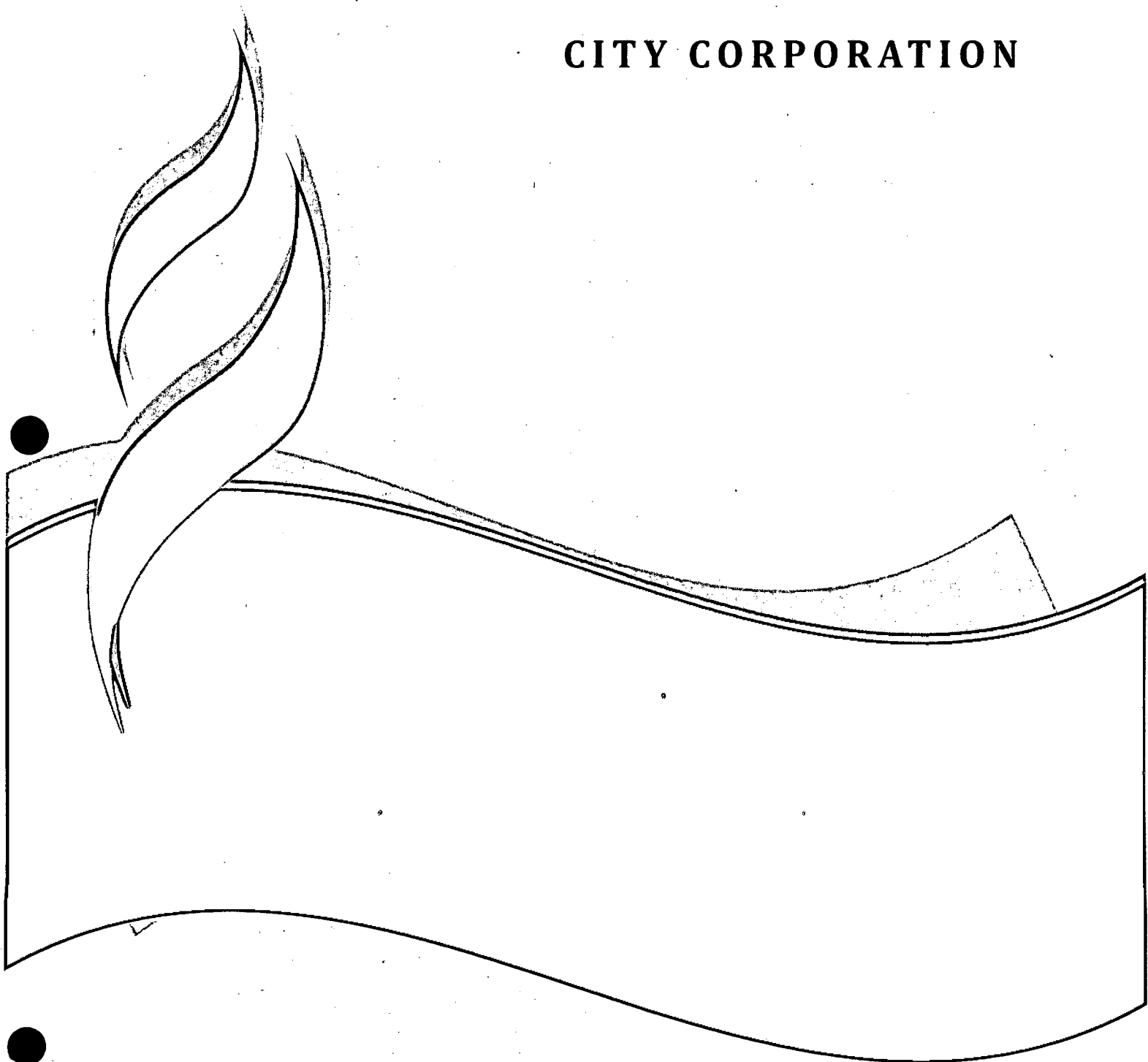
Sec. 1: This ordinance shall be in full force and effect from and after its passage, approval, recording, and publication as provided by law.

PASSED: May 12, 1983

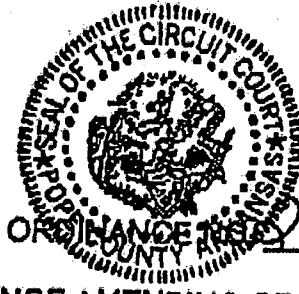
2043

CURRENT SEWER USER RATE ORDINANCE

CITY CORPORATION



This Instrument Prepared By:
 ROBERT W. HARDIN, P.A.
 Attorney at Law
 P.O. Box 868
 Russellville, AR 72811
 (479)988-5333



CLERKS CERTIFICATE OF RECORD
 STATE OF ARKANSAS - COUNTY OF POPE
 I, FERN TUCKER, Circuit Clerk and Recorder of
 the County attested do hereby certify that this
 instrument was filed for record the 12/29/2008 at
 10:53:18 AM, and the same is now
 duly recorded in Miscellaneous Book 2888-78 Page
 248 - 249

Witness my hand and the seal of said court this
 the 12/29/2008
 Fern Tucker - Circuit Clerk and Recorder
 By: *[Signature]* D.C.

**AN ORDINANCE AMENDING ORDINANCE NO. 949
 AS AMENDED BY ORDINANCE NOS. 1022, 1294 AND 1372
 TO REVISE THE SCHEDULE OF RATES AND CHARGES
 FOR THE SEWER SYSTEM, AND FOR OTHER PURPOSES**

BE IT ORDAINED by the City Council of the City of Russellville, Arkansas:

Section 1: That Section 6 of Ordinance No. 949 as amended by Ordinance Nos. 1022, 1294, and 1372, is amended to read as follows:

Section 6: That the following schedule of charges for the payment of the proper and reasonable expense of operation, repair, replacements, and maintenance of the works will be implemented:

	2009 Billing Rate to commence 1/1/09 or as soon thereafter as this ordinance becomes effective:	2010 Billing Rate to commence 1/1/10	2011 Billing Rate and thereafter to commence 1/1/11
Minimum Bill:	\$4.45 per mo.	\$5.56 per mo.	\$8.67 per mo. 6.67
<u>Volume Charge</u>			
First 1 Mg per mo.	Minimum Bill	Minimum Bill	Minimum Bill
Next 19 Mg per mo.	\$1.73 per Mg	\$2.16 per Mg	\$2.59 per Mg 2.59
Over 20 Mg per mo.	\$1.47 per Mg	\$1.84 per Mg	\$2.20 per Mg 2.20
Mg - Thousand Gallons			
mo. - Month"			

Section 2: Miscellaneous. (a) The provisions of this Ordinance are severable and if any provision shall for any reason be held illegal or invalid, such holding shall not affect the validity of the remainder of the Ordinance.

08-70-240

(b) All ordinances and resolutions or parts thereof in conflict herewith are hereby repealed to the extent of such conflict.

(c) If this Ordinance, as a whole, shall for any reason be held illegal or invalid, defeated upon referendum or otherwise invalidated or repealed, such illegality, invalidity, defeat or repeal shall not affect the validity of Ordinance No. 949 as amended by Ordinance Nos. 1022, 1294, and 1372.

Section 3: This Ordinance, being necessary for the proper operation of the City of Russellville Sanitary Sewer System and being necessary for the preservation of the ~~public health and safety, an emergency is hereby deemed to exist and this Ordinance~~ shall be in full force and effect after its passage.

PASSED this 18 day of December, 2008.

APPROVED:

Tyrone Williamson
Tyrone Williamson, Mayor

ATTEST:

Kathy Collins
Kathy Collins, City Clerk

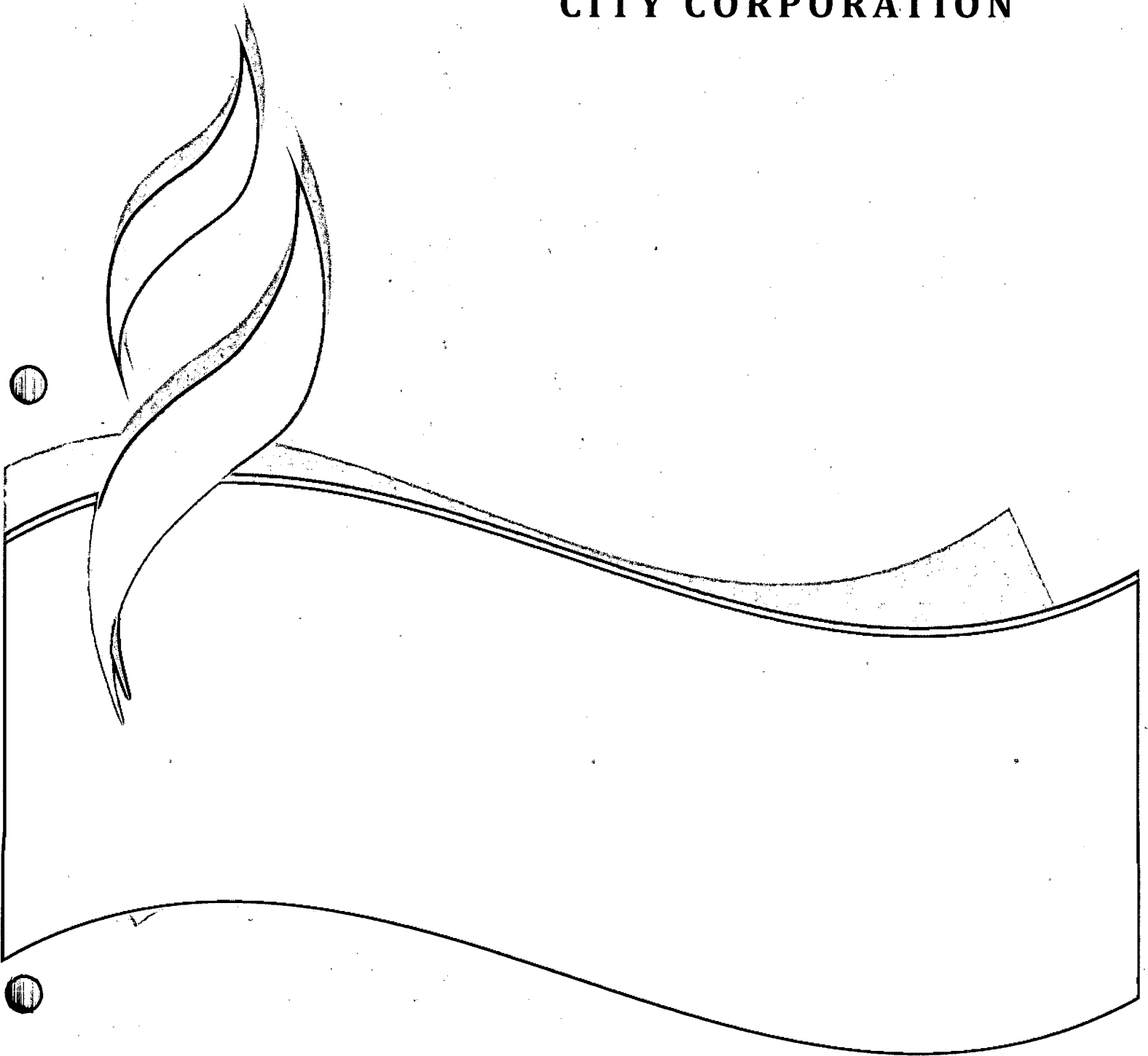


08-70-241

2044

CURRENT WATER USER RATE ORDINANCE

CITY CORPORATION



ORDINANCE NO. 2044

CLERK'S CERTIFICATE OF RECORD
 STATE OF ARKANSAS - COUNTY OF POPE
 I, FERN TUCKER, Circuit Clerk and Recorder of
 the County attested do hereby certify that this
 instrument was filed for record the 12/29/2008 at
 10:58:18 AM, and the same is now
 duly recorded in Miscellaneous Book 2008-78 Page
 117085-117086 and the said clerk and recorder
 by Fern Tucker Clerk and Recorder
 D.C.

AN ORDINANCE AMENDING ORDINANCE NO. 1078 AS AMENDED BY 242, 244,
 ORDINANCE NOS. 1080, 1210, 1244, 1273, 1302, 1308 AND 1590 TO REVISE THE
 SCHEDULE OF RATES AND CHARGES FOR WATER, AND FOR OTHER PURPOSES.

BE IT ORDAINED by the City Council of the City of Russellville, Arkansas:

Section 1: Subsection (a) of Section 5 of Ordinance No. 1078 as amended by
 Ordinance Nos. 1080, 1210, 1244, 1273, 1302, 1308, and 1590 is amended to read as
 follows:

"Section 5: Rates and Charges. (a) The following schedule of rates and
 charges, which the City Council hereby finds are reasonable and necessary for
 operating and maintaining the system, are hereby fixed as the rates and charges
 for water furnished and services rendered by the system:

Monthly Meter Charge

Each customer shall pay a monthly charge based on the size of the
 customer's water meter, as follows:

	2009 Billing Rate to commence 1/1/09, or as soon thereafter as this ordinance becomes effective	2010 Billing Rate and thereafter commencing 1/1/10
5/8" meter	\$ 7.76	\$ 8.69
1" meter	\$ 10.74	\$ 12.03
1 1/2" meter	\$ 20.41	\$ 22.86
2" meter	\$ 26.78	\$ 29.99
3" meter	\$ 43.93	\$ 49.20
4" meter	\$140.60	\$157.48
6" meter	\$173.44	\$194.26

Monthly charge for meters larger than 6" in diameter shall be based on the
 actual cost of the meter and appurtenances.

Additional Charge for Water Usage

In addition to the monthly meter charge, each customer shall be required
 to pay for water usage in accordance with the following schedules:

This Instrument Prepared By:
 ROBERT W. HARDIN, P.A.
 Attorney at Law
 P.O. Box 856
 Russellville, AR 72811
 (479)868-5333

08-70-242

	2009 Billing Rate to commence 1/1/09, or as soon thereafter as this ordinance <u>becomes effective</u>	2010 Billing Rate and thereafter <u>commencing 1/1/10</u>
RESIDENTIAL	\$1.52 per thousand for the first 2,000 gallons \$1.74 per thousand for all over 2,000 gallons	\$1.71 per thousand for the first 2,000 gallons \$1.94 per thousand for all over 2,000 gallons
COMMERCIAL	\$1.59 per thousand gallons	\$1.78 per thousand gallons
INDUSTRIAL	\$1.33 per thousand gallons	\$1.49 per thousand gallons
PUBLIC AUTHORITY	\$1.78 per thousand gallons	\$1.99 per thousand gallons
MUNICIPAL	\$1.37 per thousand gallons	\$1.53 per thousand gallons

PRIVATE FIRE PROTECTION (Fire Hydrants and Sprinkler Systems)

Size of Service Connection

Net Annual Rate

	2009 Billing Rate to commence 1/1/09, or as soon thereafter as this ordinance <u>becomes effective</u>	2010 Billing Rate and thereafter <u>commencing 1/1/10</u>
6"	\$338.11	\$378.68
8"	\$601.98	\$674.21
10"	\$939.75	\$1,052.52

Surcharge for Customers Within the City

In addition to the monthly meter charge and the additional charge for water usage, each customer whose premises are located within the corporate limits of the City shall be required to pay a surcharge (the "Surcharge") equal to 4.5% of the monthly charge to the customer for (i) monthly meter charge and (ii) additional charge for water usage.

Rates for Customers Outside the City Limits of Russellville

Each customer outside the city limits of Russellville, Arkansas, shall be required to pay one and one-half (1½) times the monthly meter charge for customers inside the city limits. In addition, each customer outside the city limits of Russellville, Arkansas, shall be required to pay one and one-half (1½) times the rate for water usage inside the city limits except for residential users outside the

08-70-243

city limits which shall be as follows:

	2009 Billing Rate to commence 1/1/09, or as soon thereafter as this ordinance <u>becomes effective</u>	2010 Billing Rate and thereafter <u>commencing 1/1/10</u>
RESIDENTIAL	\$3.15 per thousand for the first 2,000 gallons \$3.48 per thousand for all over 2,000 gallons	\$3.52 per thousand for the first 2,000 gallons \$3.90 per thousand for all over 2,000 gallons

Section 2: Ordinance No. 1078 as amended by Ordinance Nos. 1080, 1210, 1244, 1273, 1302, 1308 and 1590 is hereby amended and shall continue in full force and effect.

Section 3: Miscellaneous. (a) The provisions of this Ordinance are severable and if any provision shall for any reason be held illegal or invalid, such holding shall not affect the validity of the remainder of the Ordinance.

(b) All ordinances and resolutions or parts thereof in conflict herewith are hereby repealed to the extent of such conflict.

(c) If this Ordinance, as a whole, shall for any reason be held illegal or invalid, defeated upon referendum or otherwise invalidated or repealed, such illegality, invalidity, defeat or repeal shall not affect the validity of Ordinance No. 1078 as amended by Ordinance Nos. 1080, 1210, 1244, 1273, 1302, 1308 and 1590.

Section 4: This Ordinance, being necessary for the operation of the City of Russellville Water System and being necessary for the preservation of the public health and safety, an emergency is hereby deemed to exist and this Ordinance shall be in full force and effect after passage.

PASSED this 18 day of December, 2008.

APPROVED:

Tyrone Williamson
Tyrone Williamson, Mayor

ATTEST:

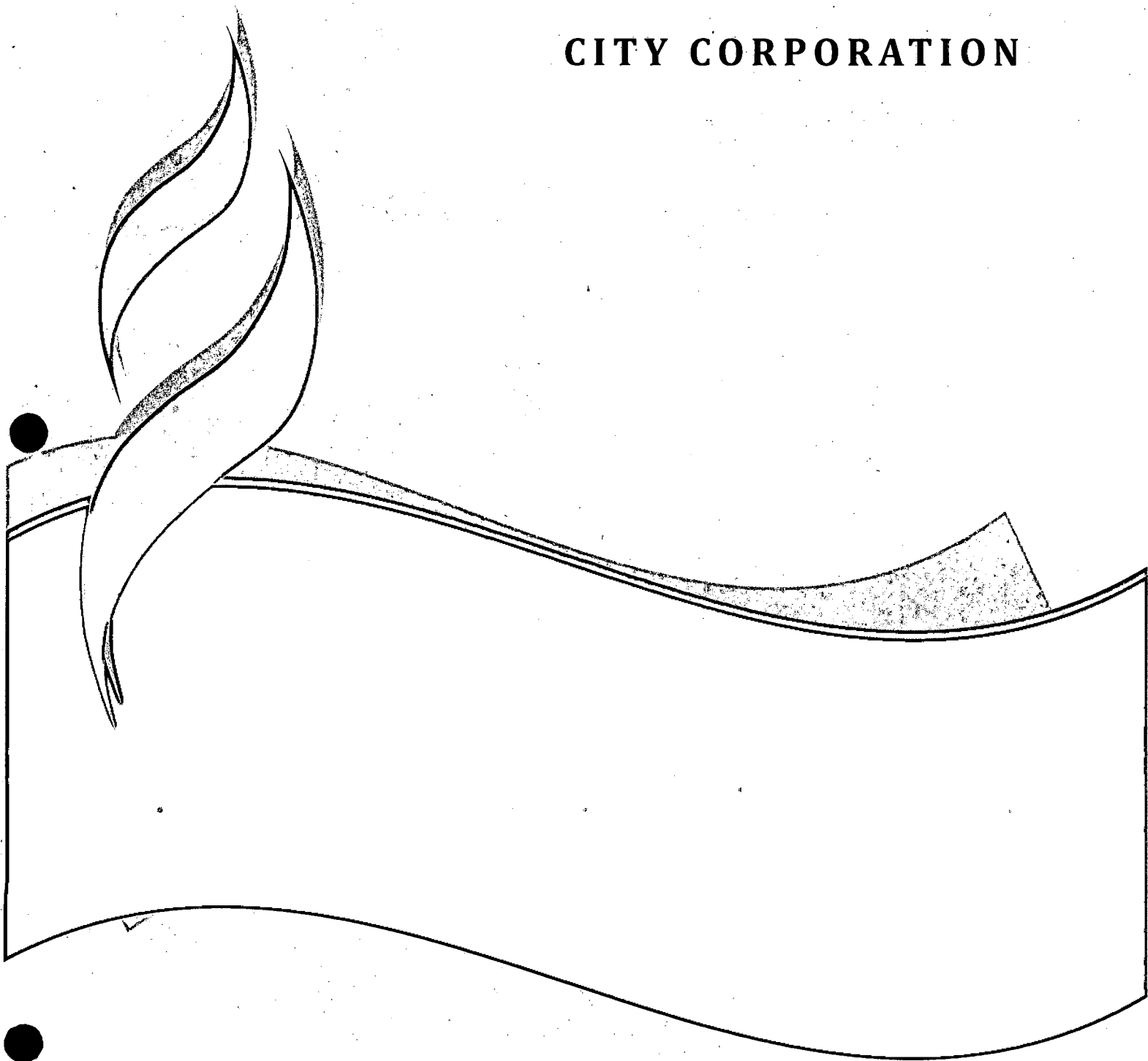
Kathy Collins
Kathy Collins, City Clerk
(SEAL)



2060

SERVICE LINE RESPONSIBILITY

CITY CORPORATION



Prepared by:
William F. Smith III
Russellville City Attorney
P.O. Box 428
Russellville, AR 72811
Sponsor: Steuber
NB#3, OB # 2



CLERKS CERTIFICATE OF RECORD
STATE OF ARKANSAS - COUNTY OF POPE
I, FERN TUCKER, Circuit Clerk and Recorder of
the County attested do hereby certify that this
instrument was filed for record the 08/28/2009 a
12:22:11 PM, and the same is now
duly recorded in Miscellaneous Book 2009-48 Page
427 - 428
Witness my hand and the seal of said court this
the 08/28/2009
Fern Tucker, Circuit Clerk and Recorder
By *Fern Tucker* D.C.

ORDINANCE NO. 2060

AN ORDINANCE AMENDING ORDINANCE NOS. 973 AND 976, CLARIFYING THE RESPONSIBILITY OF MAINTENANCE OF SEWER LINES WITHIN THE CITY OF RUSSELLVILLE, ARKANSAS, AND FOR OTHER PURPOSES

WHEREAS, the City Council desires to clarify the responsibility of maintenance of sewer lines with the City of Russellville, Arkansas.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF RUSSELLVILLE, ARKANSAS:

SECTION 1: Ordinance No. 973, Section 6, and Ordinance No. 976 are hereby amended to read as follows:

SECTION 6: "It will be the property owner's responsibility to maintain the house sewer service line from the dwelling to the owner's property line. Also, the property owner will be responsible for the clean out of any stoppage of the sewer service line from the sewer main to the dwelling or other types of structures. ~~City Corporation~~ ~~The Sewer Department~~ will be responsible for repairs of sewer service line from main to edge of the owner's property line. In the event of new construction, where it is necessary to cross the street with the house service line the property owner shall notify ~~City Corporation~~ ~~Russellville Sewer Department~~ and ~~City Corporation~~ ~~Russellville Sewer Department~~ shall give an estimate of cost to the property owner and upon the deposit of said estimate with ~~City Corporation~~ ~~Russellville Sewer Department~~ will proceed to extend the sewer service from main to customers property line according to ~~City Corporation~~ ~~Russellville Sewer Department~~ specifications. Upon the completion of the line, should the estimate be too high the balance will be refunded to the property owner, and should the estimate be too low the property owner shall reimburse ~~City Corporation~~ ~~Russellville Sewer Department~~.

09-48-427

Prepared by:
William F. Smith III
Russellville City Attorney
P.O. Box 428
Russellville, AR 72811
Sponsor: Steuber
NB#3, OB # 2

In the event a property owners sewer service line should cross the property of an adjoining property owner before reaching the sewer main that sewer service shall be treated as a prescriptive easement and shall be maintained by City Corporation.

Should the sewer service line crossing the property of neighboring property owner ever need to be relocated that expense to relocate shall be paid by the person or firm needed the line to be relocated."

SECTION 2: All ordinances or parts of ordinances in conflict with the provisions of this Ordinance are hereby repealed or amended so as to be consistent with the intent of this Ordinance.

ORDAINED, this 20th day of August, 2009.

TYRONE WILLIAMSON
TYRONE WILLIAMSON, MAYOR

ATTEST:

Kathy Collins
KATHY COLLINS, CITY CLERK

I, Kathy Collins, City Clerk of Russellville, Arkansas, hereby certify that the above and foregoing is a true and correct copy of Ordinance No. 2060 passed by the City Council of the City of Russellville, Pope County, Arkansas, on the 20th day of August 2009.

APPROVED AS TO FORM:

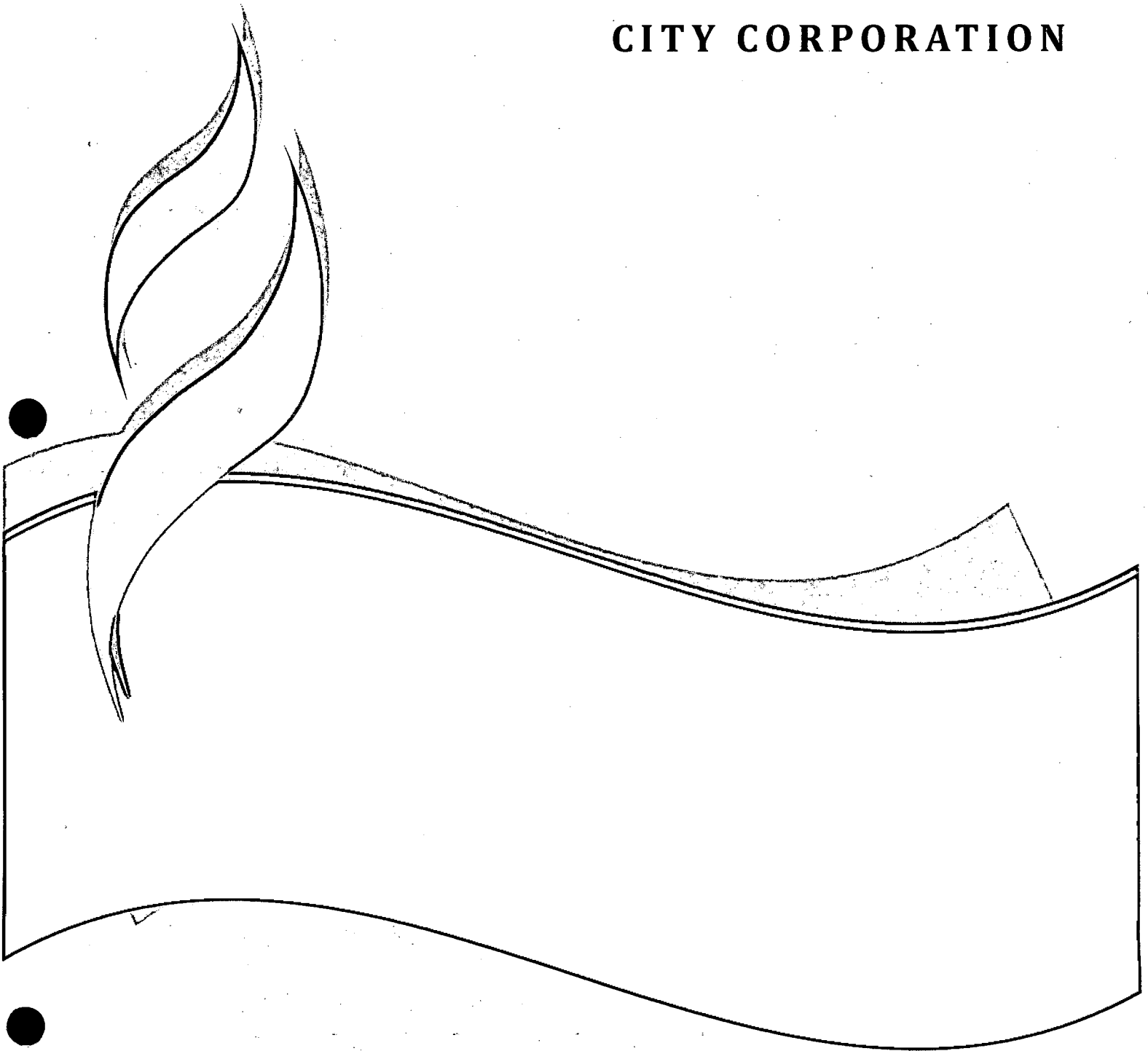
William F. Smith III
WILLIAM F. SMITH III, CITY ATTORNEY



09-48-428

AGREEMENT WITH THE CITY OF DOVER

CITY CORPORATION



CITY OF DOVER

"Gateway to the Ozarks"

P.O. Box 258

DOVER, ARKANSAS 72837

1-501-331-3270

September 12, 1991

Mr. Kenneth Lutz
Pre-treatment Coordinator
City Corporation
P.O. Box 458
Russellville, AR 72801

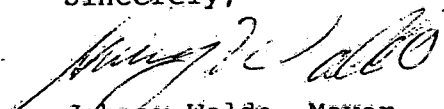
RE: City of Dover

Dear Mr. Lutz:

This is to confirm recent contacts you have had with our City Attorney, David H. McCormick, concerning Dover City Ordinance No. 89-3. This is to formally advise you that the City of Dover intends to pre-treat all sewage to whatever standard may be required by the Arkansas Department of Pollution Control and Ecology. This is to further confirm that Dover will adopt any new ordinance or amend existing ordinances as may be required in order to evidence the fact that they will comply with requirements of the DPC & E.

If you need further confirmation of the above information on behalf of the City, please contact our City Attorney, David H. McCormick, and advise him of what additional information or documentation you need.

Sincerely,



Johnny Waldo, Mayor

RESOLUTION NO. 358

WHEREAS, the CITY OF DOVER has contacted the CITY OF RUSSELLVILLE with reference to the treatment of its sewer wastes; and

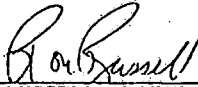
WHEREAS, such an agreement is in keeping with the rules and regulations of the Environmental Protection Agency; and

WHEREAS, the CITY OF RUSSELLVILLE, at the present time, is improving the pretreatment plant with assistance of funds provided by the Environmental Protection Agency; and

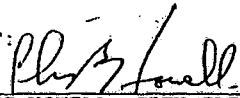
WHEREAS, it would be in the best interest of the inhabitants of the CITY OF RUSSELLVILLE to treat the sewage waste from the CITY OF DOVER.

NOW, THEREFORE BE IT RESOLVED, that the Mayor and City Clerk of the CITY OF RUSSELLVILLE, ARKANSAS, are authorized, instructed and directed to execute a contract for such waste water treatment with the CITY OF DOVER, a copy of which said agreement is attached and made a part of this resolution; that upon the signing of the agreement by the CITY OF RUSSELLVILLE and the CITY OF DOVER, that this agreement shall be in full force and effect.

This 11th day of January, 1979.



RON RUSSELL, MAYOR

ATTEST: 

CHARLES HOWELL, CITY CLERK

SEWER SERVICE AGREEMENT

BETWEEN

RUSSELLVILLE, POPE COUNTY, ARKANSAS AND
DOVER, POPE COUNTY, ARKANSAS

THIS AGREEMENT made and entered into this 11
day of Jan of 1979, by and between the CITY OF
RUSSELLVILLE, a municipal corporation of Russellville, Pope
County, Arkansas, hereinafter referred to as "RUSSELLVILLE"
and the CITY OF DOVER, a municipal corporation, of Pope County,
Arkansas, hereinafter referred to as "DOVER."

In consideration of the mutual covenants herein
contained, the parties hereto agree as follows:

SECTION I: Scope of Agreement. RUSSELLVILLE will
and shall permit the connection of the sewer service system
of DOVER with the sewer system of RUSSELLVILLE at such
locations as approved by RUSSELLVILLE and will handle and
treat sewage delivered to the RUSSELLVILLE sewage system
through the connection therewith of DOVER sewer under the
terms and conditions hereinafter more specifically set forth.

SECTION II: Extent of Service. DOVER shall limit
its sewer service connections to the residential and commercial
establishments now located along the proposed sewer lines and
shall not permit additional industrial or commercial connections
without the written approval of RUSSELLVILLE, first obtained.

SECTION III: Amount of Charges and Billing Periods.
DOVER agrees to pay to RUSSELLVILLE for all costs incurred in
the handling, transporting and treatment of raw sewage
delivered to the RUSSELLVILLE sewer facilities. Charges for
such services will be billed monthly and shall be based upon
the wholesale rates adopted by RUSSELLVILLE which currently
are established as follows:

A. Two and 25/100 Dollars (\$2.25) per month minimum for the first twenty-five hundred (2,500) gallons. Sixty Eight Cents (\$0.68) per thousand for the next seventeen thousand five hundred (17,500) gallons will be charged. Forty Six Cents (\$0.46) per thousand gallons will be charged for all sewage in excess of twenty thousand gallons (20,000). Said flowage will be metered by the CITY OF RUSSELLVILLE with DOVER installing such meter systems as may be required by RUSSELLVILLE and at the place so designated by RUSSELLVILLE.

B. DOVER will pay all the costes incurred in the administration of this contract. Such costs will include but not be limited to:

- Contract Development
- Legal Fees
- Testing Costs
- Metering Costs

C. If and when replacements or additional facilities are required for the treating, testing or metering of said sewage, DOVER shall, upon notificaion by RUSSELLVILLE, commence forthwith to provide the necessary facilities and equipment.

D. In the event the metering device fails to function, the sewage flow shall be determined based upon the most recent corresponding period to which the meter was in satisfactory operating condition, and if no such period is available, the flow shall be determined by RUSSELLVILLE.

E. The parties herto agree that the sewage delivered to the RUSSELLVILLE system shall be of standard household strength and in satisfactory condition, and should the same not be in satisfactory condition, DOVER will construct such pretreatment facilities as may be required by RUSSELLVILLE. Such facilities shall include but not limited to:

- Chlorinator
- All Expense of Operating such facilities

SECTION IV: Construction of System. DOVER agrees to construct its system in accordance with the plans and

specifications now used by RUSSELLVILLE and shall prevent the infiltration of surface water or storm drainage into the system. RUSSELLVILLE shall have the right to review plans and specifications for sewer system improvements or additions at DOVER, to inspect the DOVER system, and to require such maintenance or repair work as may be necessary to prevent the infiltration of surface water or storm drainage.

SECTION V: Conditional Industrial or Commercial Uses. In the event DOVER desires to connect an industrial or commercial user, RUSSELLVILLE shall be notified forthwith and an investigation shall be made to determine the strength and content of said effluent from said user. In the event it is deemed necessary by RUSSELLVILLE, DOVER shall construct whatever facilities are necessary for the pretreatment of the effluent from such establishment to lower the strength and content down to normal domestic sewage. RUSSELLVILLE shall not arbitrarily withhold approval for the connection of industrial or commercial customers.

SECTION VI: Dumping of Certain Material Prohibited.

DOVER shall not discharge or cause to be discharged any of the following described waters or wastes to any public sewers:

- A. Any gasoline, benzene, naphtha, fuel oil or other flammable or explosive liquid, solid or gas.
- B. Any waters or wastes containing toxic or poisonous solids, liquids, or gases in sufficient quantity, either singly or by interaction with other wastes to injure or interfere with any sewage treatment process, constitute a hazard to humans or animals, create a public nuisance, or create any hazard. The concentrations of such wastes discharged to the public sewer shall conform to the limitations set forth by the Russellville Sewer Ordinance.
- C. Any waters or wastes having a pH lower than 5.5 or having other corrosive property capable of causing damage or hazard to structures, equipment, and personnel of the sewage works.
- D. Solid or viscous substances in quantities or of such size capable of causing obstruction to the flow in sewers, or other interference

with the proper operation of the sewage works, such as, but not limited to, ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, unground garbage, whole blood, paunch manure, hair and fleshings, entrails and paper dishes, cups, milk containers, etc., either whole or ground by garbage grinders.

DOVER shall not discharge or cause to be discharged the following described substances, materials, waters or wastes if it appears likely in the opinion of RUSSELLVILLE, their consulting engineers of the Arkansas Department of Pollution Control and Ecology Board that such wastes can harm either the sewers, sewage treatment process or equipment, have an adverse effect on the receiving stream or can otherwise endanger life, limb, public property or constitute a nuisance. In forming an opinion as to the acceptability of these waters, consideration will be given to such factors as the quantities of subject wastes in relation to flows and velocities in the sewers, materials of construction of the sewers, nature of the sewage treatment process, capacity of the sewage treatment facilities, degree of treatability of wastes in the sewage treatment facilities and other pertinent factors. The substances are:

1. Any liquid or vapor having a temperature higher than one hundred fifty (150)°F (65)°C.
2. Any water or waste containing fats, wax, grease or oils, whether emulsified or not, in excess of one hundred (100) mg/l or containing substances which may solidify or become viscous at temperatures between thirty-two (32) and one hundred fifty (150) °F. and (65) °C.
3. Any garbage that has not been properly shredded. The installation and operation of any garbage grinder equipped with a motor or three-fourths (3/4) horsepower (0.76 hp metric) or greater shall be subject to review and approval.
4. Any waters or wastes containing strong acid none pickling wastes or concentrated plating solutions whether neutralized or not.

5. Any waters or wastes containing iron, chromium, copper, zinc, and similar objectionable or toxic substances; or wastes exerting an excessive chlorine requirement, to such degree that any such material received in the composite sewage at the sewage treatment works exceeds the limits established for such materials by State, Federal, or other public agencies of jurisdiction for such discharge to the receiving waters.

6. Any waters or wastes containing phenols or other taste or odor producing substances, in such concentrations exceeding limits which may be established as necessary, after treatment of the composite sewage, to meet the requirements of the State, Federal, or other public agencies of jurisdiction for such discharge to the receiving waters.

7. Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established in compliance with applicable State or Federal regulations.

8. Any waters or wastes having a pH in excess of (9.5).

9. Materials which exert or cause:

a. Unusual concentrations of inert suspended solids (such as, but not limited to, Fuller earth, lime slurries and lime residues) or of dissolved solids (such as, but not limited to, sodium chloride and sodium sulfate).

b. Excessive discoloration (such as, but not limited to, dye wastes and vegetable tanning solutions).

c. Unusual BOD, chemical oxygen demand, or chlorine requirements in such quantities as to constitute a significant load on the sewage treatment works.

d. Unusual volume of flow or concentration of wastes constituting "slugs."

10. Waters or wastes containing substances which are not amenable to treatment or reduction by the sewage

treatment processes employed, or are amenable to such treatment only to such degree that the sewage treatment facility effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters.

SECTION VII: Downspouts and Rain Leaders Not to be Connected to Sewer. DOVER shall not allow, suffer, or permit during the life of this agreement the existence or use of any downspout, rain leader, gutter or drain which is designed to be used or which shall be used in conducting rain or surface waters from any premise connected with the sanitary sewer of DOVER.

SECTION VIII: Penalty for Dumping Prohibited Materials. DOVER expressly agrees that if drainage other than sanitary sewage and waste not detrimental to RUSSELLVILLE sewage system or treatment processes does pass from DOVER'S system to RUSSELLVILLE sewage system, DOVER will pay, within ninety (90) days after written notice requesting such payment, RUSSELLVILLE for any damage incurred by DOVER resulting from such drainage. If DOVER fails to prevent the passage from its sewers into the sewage system of RUSSELLVILLE of any drainage other than sanitary sewage or waste not detrimental to RUSSELLVILLE'S sewage system or treatment processes within thirty (30) days after written notice by RUSSELLVILLE informing DOVER of such drainage, then DOVER will disconnect its sewage system from RUSSELLVILLE'S sewage system within seven (7) days after notice from RUSSELLVILLE to do so. In addition to damages, DOVER will pay RUSSELLVILLE a charge of One Hundred Dollars (\$100.00) per day for such violation from the first date of written notice.

SECTION IX: DOVER to Adopt and Enforce Regulations. DOVER will and shall enact, adopt, and strictly enforce all such resolutions, ordinances or regulations, as the case may be, as may or shall be necessary to give full effect to the stipulations contained in this agreement.

SECTION X: DOVER Must Conform to State Regulations. DOVER will and shall design, plan, lay, install, construct,

maintain, and keep in repair its own sewer facilities so that such facilities shall at all times strictly conform with all rules and regulations issued or promulgated by the STATE OF ARKANSAS and the CITY OF RUSSELLVILLE.

SECTION XI: Liability for Negligence. DOVER shall indemnify and hold harmless RUSSELLVILLE from any and all loss or damage to any property, incurred by RUSSELLVILLE by reason of any act or omission of DOVER, its agents or employees in connection with the operation and maintenance of the sanitary sewer facilities belonging to DOVER, unless the same shall be due to the negligence of RUSSELLVILLE, its agents or employees; and RUSSELLVILLE shall indemnify and hold harmless DOVER by reason of any act or omission on the part of RUSSELLVILLE, its agents or employees, in connection with the operation and maintenance of RUSSELLVILLE'S sanitary sewer system, unless the same shall be due to the negligence of DOVER, its agents or employees.

SECTION XII: Non-Liability of RUSSELLVILLE under Certain Circumstances. RUSSELLVILLE shall exercise diligence in operating its sewage systems, and if it be prevented from receiving and discharging sewage from DOVER, in accordance with the terms of this agreement, by any cause not reasonably within the control of RUSSELLVILLE, including, but not limited to, fire, explosion, flood, strike and unavoidable accident, rupture of pipe resulting from temperature change or ground disturbances, Federal or State interference, RUSSELLVILLE agrees (except in the case of practically total destruction of its properties) diligently to put its works in condition again to dispose of sewage in the manner provided for in this agreement. DOVER shall hold RUSSELLVILLE blameless for any damage or loss resulting from such interruption or suspension.

SECTION XIII: Terms of Agreement. This agreement shall be effective for a period of two (2) years at which time

the charges will be subject to change based upon the cost of providing service related to handling, transporting, and treatment. The length of term thereafter shall be a one (1) year period and shall remain in effect until terminated by mutual agreement of RUSSELLVILLE and DOVER. Should any portion of the charges specified in this agreement not be acceptable to EPA, the charges specified may be revised so that RUSSELLVILLE may conform to EPA requirements.

SECTION XV: Title to Remain with RUSSELLVILLE. It is understood and agreed that the title to the present sewer facilities of the CITY OF RUSSELLVILLE shall remain in RUSSELLVILLE and that title to the DOVER facility shall remain in DOVER. That RUSSELLVILLE shall have the duty for the care and upkeep of its facilities, and DOVER shall have the duty of the care and upkeep of its facilities.

This agreement shall be binding upon and inure to the benefits of the respective successors and assigns of RUSSELLVILLE and DOVER.

IN WITNESS WHEREOF, the CITY OF RUSSELLVILLE has caused this agreement to be signed in duplicate by its Mayor, attested by its Clerk, and its corporate seal to be hereunto affixed, pursuant to a resolution of the City Council of the CITY OF RUSSELLVILLE, a certified copy whereof is hereto annexed, and the CITY OF DOVER has caused this agreement to be executed by its Mayor, attested by its Clerk, and its corporate seal to be hereunto affixed pursuant to a resolution duly adopted by the City Council of DOVER, a certified copy whereof is hereto annexed.

CITY OF RUSSELLVILLE

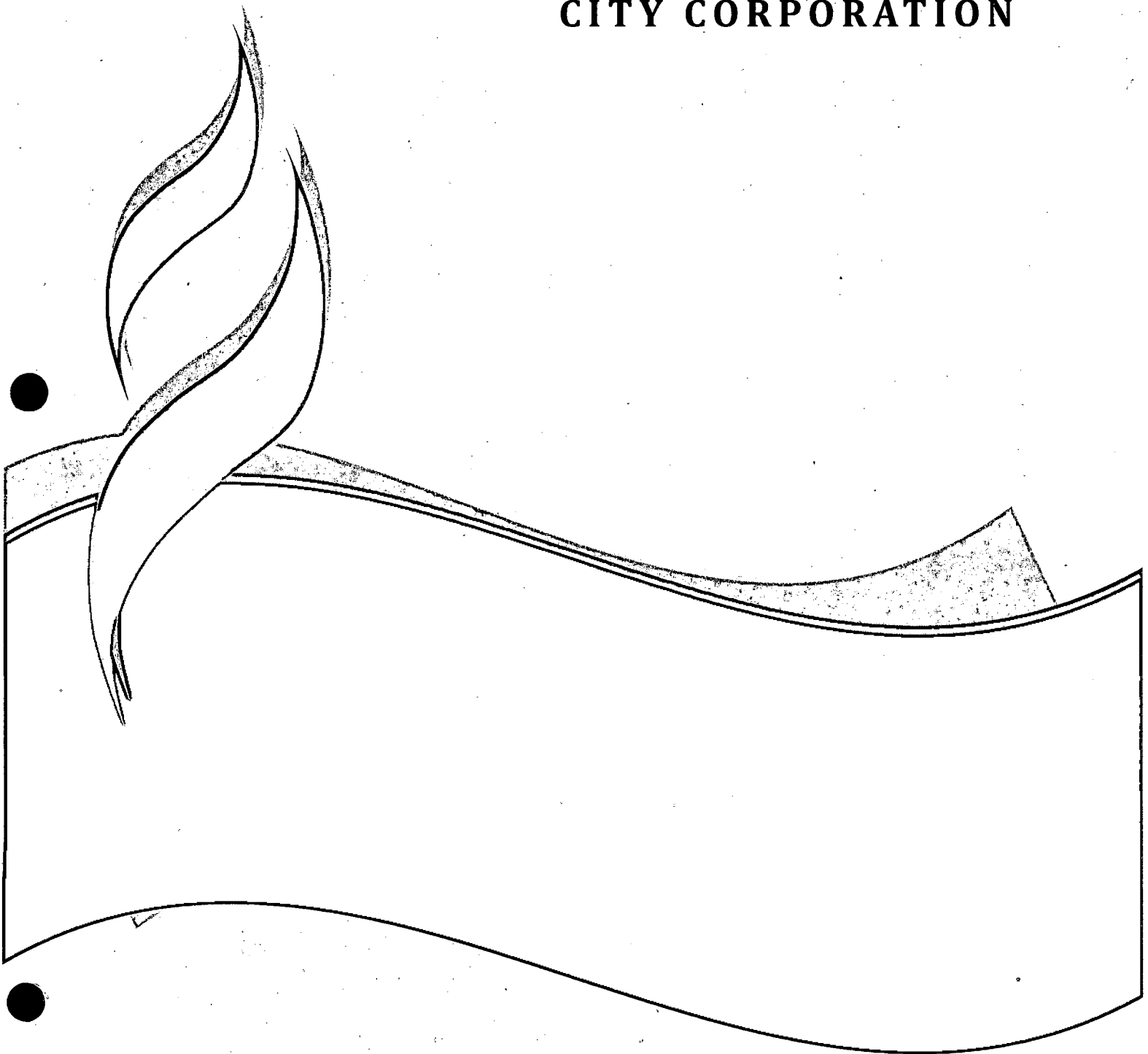
BY: Bob Russell
MAYOR

ATTEST: Phil Howell

1388

AMENDED PRETREATMENT ORDINANCE

CITY CORPORATION



ORDINANCE NO. 1388

AN ORDINANCE SETTING FORTH UNIFORM REQUIREMENTS FOR DIRECT AND INDIRECT CONTRIBUTORS INTO THE WASTEWATER COLLECTION AND TREATMENT SYSTEM FOR THE CITY OF RUSSELLVILLE AND ENABLING THE CITY TO COMPLY WITH ALL APPLICABLE STATE AND FEDERAL LAWS REQUIRED BY THE CLEAN WATER ACT OF 1977 AND THE GENERAL PRETREATMENT REGULATIONS (40 CFR PART 403).

SECTION 1 - GENERAL PROVISIONS

1.0 Short Title: This Ordinance shall also be known as the Pretreatment Ordinance.

1.1 Purpose and Policy:

a. This Ordinance sets forth uniform requirements for direct and indirect contributors into the wastewater collection and treatment system for the City of Russellville (The City) and enables The City to comply with all applicable State and Federal laws required by the Clean Water Act of 1977 and the General Pretreatment Regulations set out in 40 CFR Part 403.

b. The objectives of this Ordinance are:

(1) To prevent the introduction of pollutants into The Citys wastewater treatment and collection system which will interfere with the operation of the system or contaminate the resulting sludge;

(2) To prevent the introduction of pollutants into The Citys wastewater treatment and collection system which will pass through the system, inadequately treated, into receiving waters or the atmosphere or otherwise be incompatible with the system;

(3) To improve the opportunity to recycle and reclaim wastewater and sludge from The Citys wastewater treatment system;

(4) To prevent any violation of The Control Authoritys National Pollutant Discharge Elimination System permit.

c. This Ordinance provides for the regulation of direct and indirect contributors The Citys wastewater treatment and collection system through the issuance of permits to certain non-domestic Users, the enforcement of general requirements for the other

Users, authorized monitoring and enforcement activities, required User reporting, and the assumption that existing customers capacity will not be preempted.

d. The terms and provisions of this Ordinance shall apply to all connections of lateral or other sewer lines to the sewerage system of the POTW whether within or outside The City and to all persons within The City and outside The City who are, by contract or agreement with The City, Users of The Citys wastewater collection and treatment system.

e. It is in the best interest of The City, to clarify and update the provisions of its existing wastewater Ordinance by the provisions of this Ordinance, so as to achieve compliance with the Clean Water Act and the regulations pursuant thereto, 40 CFR Part 403 as amended July 24, 1990. It is therefore intended that this Ordinance shall take precedence over any term or condition of agreements or contracts of The City or The Control Authority which are inconsistent with the provisions of this Ordinance, and over any and all inconsistent terms and conditions of any previous Ordinance.

f. Except as otherwise provided herein, The Control Authority is hereby authorized to administer, implement and enforce the provisions of this Ordinance. The National Pollution Discharge Elimination System (NPDES) permit shall be issued in the name of The Control Authority. The Control Authority as of the date of this Ordinance is City Corporation, a non-profit corporation established by City Resolution in April 1985. The City shall be responsible for all legal action necessary to enforce the provisions of this Ordinance.

1.2 Definitions

a. Unless the context specifically indicates otherwise, the following terms and phrases, as used in this Ordinance, shall have the meanings hereinafter designated:

(1) Act or the Act: The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, Title 33 U.S.C. 1251, et. seq.

(2) Approval Authority: The Director of the Arkansas Department of Pollution Control and Ecology.

(3) Authorized Representative of a User: An authorized representative of a User may be: (1) A principal executive officer of at least the level of vice-president, if the User is a corporation; (2) A general partner or proprietor if the Industrial user is a partnership or proprietorship; or (3) A duly authorized representative or other individual designated above, if such representative is responsible for the overall operation of the facilities from which the indirect discharge originates and a statement outlining said individuals authority is submitted to The Control Authority in writing.

(4) Biochemical Oxygen Demand (BODs): The quantity of oxygen utilized in the biochemical oxidation of organic matter under laboratory condition of five (5) days at 20 degrees centigrade and expressed in terms of mass loading or concentration.

(5) Bypass: The accidental or intentional diversion of wastewater from any portion of a users pretreatment facility.

(6) City (The City): The City of Russellville or the City Council.

(7) Chemical Oxygen Demand (COD): A measure of the total oxygen consuming capacity of inorganic and organic matter present in the water or wastewater expressed in mass loading or concentration.

(8) Composite Sample: A sampling procedure defined in 40 CFR 403, Appendix E - Sampling Procedures, I. Composite Method.

(9) Control Authority: Under the provisions of 40 CFR 403.12(a) the Control Authority is charged with the administration, operation and maintenance of the POTW and enforcement of the provisions of this Ordinance.

As of the date of this Ordinance, Control Authority is City Corporation.

(10) Control Mechanism: Control through permits, orders or other means the contribution of each Significant Industrial user to the POTW to ensure compliance with applicable pretreatment standards and regulations.

(11) Direct Discharge: The discharge of treated or untreated wastewater directly to the waters of the State of Arkansas.

(12) Environmental protection Agency (EPA): The U.S. Environmental Protection Agency, or where appropriate the term may also be used as a designation for the Administrator or other duly authorized official of EPA.

(13) Grab Sample: A sampling procedure defined in 40 CFR 403, Appendix E - Sampling Procedures, II. Grab Method.

(14) Holding Tank Waste: Any waste from holding tanks - such as vessels, chemical toilets, campers, trailers, septic tanks, and vacuum pump trucks.

(15) Indirect Discharge or Contribution: The discharge or contribution of non-domestic pollutants from any source, including holding tank wastes to the POTW.

(16) Industrial User: Any business User discharging any materials other than normal domestic sanitary wastewater.

(17) Interference: The inhibition or disruption of the POTW treatment processes or operations which contribute to a violation of any requirement of The City's NPDES permit or causes harm to the POTW. The term includes the prevention of sewage sludge use or disposal by the POTW in accordance with Section 405 of the Act, Title 33 U.S.C. 1345, or any criteria, guidelines, or regulations developed pursuant to the Solid Waste Disposal Act (SWDA), the Clean Air Act, the Toxic Substances Control Act, or more stringent state criteria (including those contained in any State sludge management plan prepared pursuant to Title IV

of SWDA) applicable to the method of disposal or use employed by the POTW.

(18) National Categorical Pretreatment Standard, categorical Pretreatment Standard, or Categorical Standard: Any regulation containing pollutant discharge limits promulgated by the EPA in accordance with Section 307(b) and © of the Act, Title 33 U.S.C. 1347, which applies to a specific category of Significant Industrial Users.

(19) New Source: Any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced after the publication of proposed pretreatment standards under Section 307© of the Act which will be applicable to such source if such Standards are thereafter promulgated in accordance with that Section and meeting the requirements of 40 CFR 403.3(k).

(20) National Pollution Discharge Elimination System Permit or (NPDES): A permit issued pursuant to Section 402 of the Clean Water Act, Title 33 U.S.C. 1342, which establishes limits on the quality and quantity of discharges to the waters of the State.

(21) Pass Through: A discharge which exits the POTW into the waters of the State in quantities or concentration levels which, along or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTWS NPDES permit or increases the magnitude or duration of a violation.

(22) Person: Any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, governmental entity or any other legal entity, or their legal representatives, agents or assigns. The masculine gender shall include the feminine, the singular shall include the plural where indicated by the context.

(23) pH: A measure of the acidity of a liquid and expressed as the negative logarithm (base 10) of the hydrogen ion concentration, and stated in standard units SUs.

(24) Pollution: The man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.

(25) Pollutant: Any dredge spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.

(26) Pretreatment or Treatment: The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutants, or the alteration of the nature of pollutant properties in wastewater to a less harmful state, prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW. The reduction or alteration can be obtained by physical, chemical or biological processes, or process changes by other means, except as prohibited by 40 CFR Section 403.6(d).

(27) Pretreatment Requirements: Any substantive or procedural requirements related to pretreatment, including those imposed on Significant Industrial Users by the National Categorical Pretreatment Standards.

(28) Pretreatment Standards or Standards: Any limitation as set forth in Section 2 of this Ordinance.

(29) Publicly Owned Treatment Works (POTW): The treatment works, as defined by Section 212 of the Act, Title 33 U.S.C. 1292, which is owned by The City. This definition includes the treatment plant and any sewers that convey wastewater to the POTW treatment plant, but does not include pipe, sewers or other conveyances not connected to a facility providing treatment. For the purposes of this Ordinance, the POTW shall also include any sewers that convey wastewaters to the POTW from persons outside the city who are, by contract or agreement with The City, users of The City's POTW.

(30) POTW Treatment Plant: That portion of the POTW designed to provide treatment to wastewater.

(31) Shall is mandatory; May is permissive.

(32) Significant Industrial User: Any User of the POTW except as noted in 40 CFR §403.3(t) who (i) is subject to Categorical Pretreatment Standards under 40 CFR §403.6 and 40 CFR Chapter 1, Subchapter N, or (ii) any other user that discharges an average flow of 25,000 gallons per work day or more of process wastewater to the POTW (excluding sanitary, non-contact cooling and boiler blowdown wastewater); contributes a process waste stream which makes up 5% or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated a Significant Industrial User by The Control Authority, on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement.

(33) Significant Noncompliance: See, Section 4.8.a of this Ordinance.

(34) Slug Discharge: A slug discharge is any discharge of a non-routine, episodic nature, including, but not limited to, an accidental spill or non-customary batch discharge.

(35) State: State of Arkansas.

(36) Standard Industrial Classification (SIC): A classification pursuant to the Standard Industrial Classification Manual issued by the Executive Office of the President, Office of Management and Budget, 1972.

(37) Storm Water: Any flow occurring during or following any form of natural precipitation and resulting therefrom.

(38) Total Suspended Solids (TSS): The total concentration of matter that floats on the surface of, or is suspended in, water, wastewater or other liquids, and which is removable by laboratory filtering.

(39) Total Toxic Organics (TTO): The sum of the masses or concentration of specific toxic organic compounds

found in Users process discharge at a concentration greater than 0.01 mg/l.

(40) Toxic Pollutant: Any pollutant or combination of pollutants listed as toxic in regulations promulgated by the Administrator of the Environmental Protection Agency under the Section of 307(a) of the Act or other Acts.

(41) User: Any person who, directly or indirectly, contributes, causes or permits the contribution of wastewater into The City's POTW. The term user, depending on the context in which the term is used, includes Industrial Users and Significant Industrial Users.

(42) Wastewater: The liquid and water-carried Industrial or domestic wastes from dwellings, commercial buildings, industrial facilities, and institutions, together with any ground water, surface water, and storm water that may be present, whether treated or untreated, which is contributed into or permitted to enter the POTW.

(43) Waters of the State: All streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the State or any portion thereof.

(44) Wastewater Contribution Permit: See. Section 4.2. of this Ordinance.

1.3 Abbreviations

The following abbreviations shall have the designated meanings:

ADPC&E - Arkansas Department of Pollution Control & Ecology
BOD - Biochemical Oxygen Demand
CFR - Code of Federal Regulations
COD - Chemical Oxygen Demand
EPA - Environmental Protection Agency
l - Liter

mg - Milligrams
mg/l - Milligrams per liter
NPDES - National Pollutant Discharge Elimination System
POTW - Publicly Owned Treatment Works
SIC - Standard Industrial Classification
SWDA - Solid Waste Disposal Act, 42 U.S.C. 6901, et.seq.
USC - United States Code
TSS - Total Suspended Solids

SECTION 2 - REGULATIONS

2.1 General Discharge Prohibition

a. It shall be unlawful for any User to contribute or cause to be contributed, directly or indirectly, any pollutant or wastewater which will interfere with the operation or performance of the POTW, causes a pass-through, which is defined in 1.2.a(21) of this Ordinance, or which violates any statute, rule, regulation or ordinance of any public agency. This general prohibition applies to all such users of the POTW whether or not the User is subject to National Categorical Pretreatment Standards or any other National, State, or local pretreatment standards or requirements.

b. A user may not contribute the following substances to the POTW:

(1) Any liquid, solid or gas which creates singly or by interaction with other substances a fire or explosion hazard in the POTW, including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 50 degrees Centigrade using the test methods specified in ASTM standards D-93-79, D-93-80, or D-3278-78 (incorporated by reference, see 40 CFR 260.11). This prohibition does not apply to any aqueous solution containing less than 24 percent alcohol by volume which would otherwise be a hazardous waste under 40 CFR 261.21 by virtue of having a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade.

(2) Any wastewater which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 6.0. The Control

Authority will develop and assign maximum pH discharge permit limitations based upon appropriate criteria.

(3) Any solid or viscous substance in amounts which will cause obstruction to the flow in the POTW or will result in Interference to the POTW.

(4) Any substance or substances, including oxygen demanding pollutants, directly or indirectly discharged at a flow rate or concentration level which will cause Interference with the POTW.

(5) Any wastewater having a temperature which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees C (104 degrees F) unless The Control Authority approves alternate temperature limits.

(6) Any wastewater containing concentration levels or flow rates of petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through.

(7) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems.

(8) Any trucked or hauled pollutants, except at discharge points designated by The Control Authority.

(9) Any wastewater containnig toxic substances in sufficient quantity, either singly or by interaction with other substances, to injure or interfere with any wastewater treatment process, constitute a hazard to humans or animals, create a toxic effect in the receiving waters or exceed the limitations set forth in a Categorical Pretreatment Standard. A toxic substance shall include but not be limited to those identified under Section 307(a) of the Act.

(10) Any substance which may cause the POTWs effluent or any other roduct of the POTW such as redidues, sludges, or scums, to be unsuitale for reclamation and reuse or to interfere with the reclamation process. In

no case, shall a substance discharged to the POTW cause the POTW to be in noncompliance with sludge use or State or Federal disposal criteria.

(11) Any substance containing any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by The Control Authority in compliance with applicable State and Federal regulations.

(12) Any substance which will cause the POTW to violate its NPDES permit or the receiving waters water quality standards.

(13) Any wastewater which may cause a hazard to human health or create a public nuisance.

c. When the Control Authority determines that a User is contributing to the POTW, any of the above enumerated substances in such amounts as to interfere with the operation of the POTW, or to cause The Control Authority to be in violation of any applicable statute, regulation or permit, The Control Authority shall:

- 1) Advise the User of the impact of the contribution of the POTW;
- 2) Develop effluent limitation for such User to correct the violation or interference with the POTW and
- 3) Take any enforcement measures, necessary and appropriate under the circumstances.

2.2 Federal Categorical Pretreatment Standards:

a. Upon the promulgation of the Federal Categorical Pretreatment Standards for a particular industrial subcategory, the Federal Standard, if more stringent than limitations imposed under this Ordinance for sources in that subcategory, shall immediately supersede the limitations imposed under this Ordinance.

b. It shall be the responsibility of each User to be knowledgeable of all regulations applicable to the User. The Control Authority shall make all reasonable efforts to notify all affected users of the applicable Standards and reporting Requirements under 40 CFR

403.12. Failure of The Control Authority to notify an affected user, however, does not relieve the User of complying with the appropriate Federal Categorical Pretreatment Standards or applicable reprotng requirements.

2.3 Modification of Federal Categorical Pretreatment Standards:

If The Citys POTW treatment plant achieves consistent removal of pollutants limited by Federal Pretreatment Standards, The Control Authority may apply, to the Approval Authority for modification of specific limits in the Federal Pretreatment Standards. Consistent Removal shall mean reduction in the amount of a pollutant or alteration of the nature of the pollutant by the POTW treatment plant to a less toxic or harmless state in the effluent which is achieved by the POTW treatment plant in 95 percent of the samples taken when measured according to the procedures set forth in 40 CFR 403.7(c)(2) - General Pretreatment Regulations for Existing and New Sources of Pollution. The Control Authority may then modify pollutant discharge limits in the Federal Pretreatment Standards if the requirements contained in 40 CFR 403.7 are fulfilled and prior approval from the Approval Authority is obtained.

2.4 Specific Pollutant Limitations

a. It shall be unlawful to and no user shall discharge wastewater or waste into The Citys POTW which will cause the influent concentration at the POTW treatment plant to exceed the following limits:

Pollutant	Maximum Concentration (mg/l)
Arsenic	0.07 mg/l
Cadmium	0.014 mg/l
Chromium (Total)	0.18 mg/l
Copper	0.28 mg/l
Cyanide	0.15 mg/l
Lead	0.22 mg/l
Mercury	0.015 mg/l
Nickel	0.33 mg/l
Silver	0.28 mg/l
Zinc	0.62 mg/l

b. The Control Authority will develop and assign specific discharge permit limitations for its

Significant Industrial Users based upon the above limitations and an allocation mechanism set forth in The Citys approved pretreatment program, developed after receiving and considering comments from existing Significant Industrial Users. The specific permit limits will be developed to insure the above limits are not exceeded at the POTW treatment plant.

c. In addition, The Control Authority may develop specific discharge limitations for any other toxic or inhibiting pollutant which may be determined to be of sufficient quantity to cause POTW interference, POTW Pass Through, endanger the health and safety of the POTW personnel or general public, produce environmental harm, cause a POTW permit violation or render the POTWs sludges unacceptable for economical reclamation, disposal, or use. Such substances include but are not limited to:

Ammonia	Bismuth	Uranyl	Pesticides	Tin
Antimony	BOD	Manganese	Selenium	TSS
Barium	Boron	Molybdenum	Strontium	COD
Beryllium	Cobalt	Oil & Grease		Tellurium

d. Section a. through c. are in addition to other restrictions on discharges shall apply in any case where they are more stringent than Federal requirements and limitations or those in this Ordinance.

2.6 The Citys Right of Revision:

The City reserves the right to establish by ordinance more stringent limitations to requirements on discharge to the POTW if deemed necessary to comply with the objectives presented in Section 1.1 of this Ordinance. If more stringent limitations or requirements are deemed necessary, Industrial Users will have a reasonable time period to comply with such revisions. The time period will be established on a case by case basis by The Control Authority.

2.7 Excessive Discharge

Except where expressly authorized to do so by applicable pretreatment standards or requirements, no User shall ever increase the use of process water or in any way attempt to

dilute a discharge as partial or complete substitute for adequate treatment to achieve compliance with a pretreatment standard or requirement. The Control Authority may impose mass limitations on Users which are using dilution to meet applicable pretreatment standards or requirements, or in other cases where the imposition of mass limitations is appropriate.

2.8 Slug Discharges:

a. Each User shall provide protection from the Slug Discharge of prohibited materials or other substances regulated by this Ordinance. Facilities to prevent Slug Discharge of prohibited materials shall be provided and maintained at the owner or Users own cost and expense. For new sources, a detailed plan containing all of the minimum elements listed in 40 CFR 403.8(f)(2)(v) and a pretreatment facility and operating procedures to provide this protection shall be submitted to The Control Authority for review, and shall be approved by The Control Authority before construction of the facility. No New Source who is a Significant Industrial User ready to begin contribution to the POTW after the effective date of this Ordinance shall be permitted to introduce pollutants into the POTW until a Slug Discharge Procedures Plan has been approved by The Control Authority. All existing Significant Industrial Users shall complete such a plan for Slug Discharge procedures within one year of the effective date of this Ordinance. Review and approval of the Slug Discharge Procedures Plan and operating procedures shall not relieve the Significant Industrial User from the responsibility to modify its facility as necessary to meet the requirements of this Ordinance.

b. IN THE CASE OF A SLUG DISCHARGE, IT IS THE RESPONSIBILITY OF THE USER TO IMMEDIATELY TELEPHONE AND NOTIFY THE CONTROL AUTHORITY OF THE INCIDENT. The notification shall include location of discharge, type of waste, concentration and volume, and corrective actions.

c. Written Notice: Within five (5) days following, an Slug Discharge the User shall submit to the Control Authority a detailed written report describing the cause of the discharge and the measures to be taken by

the User to prevent similar future occurrences. Such notification shall not relieve the user of any expense, loss, damage, or other liability which may be incurred as a result of damage to the POTW, fish kills, or any other damage to person or property; nor shall such notification relieve the User of any fines, civil penalties, or other liability, which may be imposed under the provisions of this Ordinance or other applicable law.

d. Notice to Employees: A notice shall be permanently posted on the Significant Industrial Users bulletin board or other prominent place advising employees whom to call in the event of a slug discharge. Employers shall insure that all employees who may cause such a slug discharge to occur are advised of the emergency notification procedure.

2.9 Prohibition of Bypasses:

a. The Users pretreatment facility or device must be in operation at all times to the extent necessary to meet the applicable federal, state and local requirements and regulations and any intentional diversion, except as noted in Section 2.9.b below, of wastewater from any portion of the Users pretreatment facility or device is prohibited.

b. A bypass may be excused, however, if the bypass is necessary and there is no feasible alternative to prevent loss of life, personal injury or severe property damage. The no feasible alternative criterion is not satisfied if, in the exercise of reasonable engineering judgement, adequate back-up equipment should have been installed to prevent a bypass which occurs during a period of maintenance or in a period of equipment downtime.

c. Knowledge of a pending bypass must be reported immediately to The Control Authority. If the bypass is unanticipated the User must give oral notice of the Bypass within 24 hours of becoming aware of the bypass.

d. For both anticipated and unanticipated bypasses, the user must submit to The Control Authority a written report within 5 working days describing the following:

- (1) The nature of the Bypass;
- (2) the cause;
- (3) the duration and
- (4) solutions to avoid future bypasses.

SECTION 3 - FEES AND SURCHARGES

3.1 Purpose

It is the purpose of this chapter to provide for the recovery of costs from Users of the POTW for the implementation of the program established herein. The applicable fees and surcharges are set forth in The City's Schedule of Charges and Fees.

3.2 Fees:

- a. The City may adopt charges and fees which may include:
 - (1) Fees for reimbursement of costs of setting up and operating The Control Authority's Pretreatment Program;
 - (2) Fees for monitoring, inspections and surveillance procedures;
 - (3) Fees for reviewing Accidental Discharge procedures and construction;
 - (4) Fees for permit applications;
 - (5) Fees for filing appeals;
 - (6) Fees for consistent removal by The Control Authority of pollutants otherwise subject to Federal Pretreatment Standards; or
 - (7) Other fees as The City may deem necessary to carry out the requirements contained herein.

- b. These fees related solely to the matters covered by this Ordinance and are separate from all other fees chargeable by The City.

3.3 Surcharges:

- a. The discharge of pollutants in concentrations above that found in normal domestic wastewater may be accepted by the POTW from Users provided that:
 - (1) The concentration levels of the constituent are not above that established by The Control Authority for the acceptance of such wastewater.
 - (2) The wastewater has none of the characteristics

described in Section 2.1 of the Ordinance;

(3) The User pays to The Control Authority a Surcharge for the acceptance of such wastes in addition to its normal fee.

b. The permissible concentration ranges for the constituents eligible for acceptance, and a schedule of the surcharge costs together with certain restriction and limitations will be established by The Control Authority and incorporated into the Wastewater Contribution Permit of the Significant Industrial User.

SECTION 4 - ADMINISTRATION

4.1 Wastewater Discharge:

a. It shall be unlawful for a Significant Industrial User to discharge wastewater to the POTW without a current Wastewater Contribution Permit issued by The Control Authority in accordance with the provisions of this Ordinance.

b. It shall be unlawful to discharge wastewater to any natural outlet with the city, or in any area under the jurisdiction of The City without an NPDES permit of State permit issued by the Arkansas Department of Pollution Control and Ecology.

4.2 Wastewater Contribution Permits:

4.2.1 General Permits

a. All Users, currently not permitted by The Control Authority, who may discharge anything other than normal domestic sanitary wastewater must, if they have not previously done so, provide sufficient information or make an application for a Wastewater Contribution Permit so that The Control Authority can determine whether the applicant is a Significant Industrial User who must obtain a permit.

b. All Significant Industrial Users proposing to connect to or to contribute to the POTW shall obtain a Wastewater Contribution Permit before connecting to or contributing to the POTW. All existing Significant

Industrial Users, currently not permitted by The Control Authority, connected to or contributing to the POTW shall obtain a Wastewater Contribution Permit within 180 days after the effective date of this Ordinance.

4.2.2 Permit Application

a. Significant Industrial Users required to apply for or obtain a Wastewater Contribution Permit shall complete and file with The Control Authority an application in the form prescribed by The Control Authority and accompanied by a fee outlined in The City's schedule of charges and fees. Existing Significant Industrial Users so required shall apply for a Wastewater Contribution Permit within 90 days after the effective date of this Ordinance, and proposed new Significant Industrial Users shall apply at least 90 days prior to connecting to or contributing to the POTW. At the discretion of The Control Authority, applications received within 90 days of the desired date of connection to or contribution to the POTW will be processed as expeditiously as possible. In support of the application, the Significant Industrial User shall submit, in writing and terms appropriate for evaluation, the following information, unless deemed inapplicable by The Control Authority.

- (1) Name, address, and location, (if different from the address);
- (2) SIC number according to the Standard Industrial Classification manual, Bureau of the Budget, 1972, as amended;
- (3) Wastewater constituents and characteristics including but not limited to those mentioned in Section 2 of this Ordinance as determined by a reliable analytical laboratory; sampling and analysis shall be performed in accordance with procedures established by the EPA pursuant to Section 304(h) of the Act and contained in 40 CFR, part 136, as amended;
- (4) Time and duration of contribution;
- (5) Average flow rates, including daily, monthly and

seasonal variations if any;

(6) Site plumbing plans and details to show all sewers, sewer connections, and appurtenances by the size, location and elevation;

(7) Description of activities, facilities and plant processes on the premises including all materials which are or could be discharges;

(8) Where known, the nature and concentration of any substances in the discharge which are limited by any City, State, or Federal Pretreatment Standard, and a statement regarding whether or not the pretreatment standards are being met on a consistent basis and if not, whether additional Operation and Maintenance (O & M) and/or additional pretreatment is required for the Significant Industrial user to meet applicable pretreatment standards; and

(9) If additional pretreatment and/or O&M will be required to meet the pretreatment standards, the shortest schedule by which the Significant Industrial user will provide such additional pretreatment. The completion date in this schedule shall not be later than the compliance date established for the applicable pretreatment standard. The following conditions shall apply:

(a) The schedule shall contain increments of progress in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the Significant Industrial user to meet the applicable pretreatment standard (e.g., hiring an engineer, completing preliminary plans, completing final plans, executing contract for major components, commencing construction, completing construction, etc.).

(b) No increment referred to in paragraph (9)(a) above shall exceed 9 months.

(c) Not later than 14 days following each date in the schedule and the final date for compliance, the Significant industrial user shall submit a

progress report to The Control Authority including, as a minimum, whether or not it complied with the increment of progress to met on such date and, if not, the date on which it expects to comply with this increment of progress, the reason for delay, and the steps being taken by the Significant Industrial user to return the construction to the schedule established. In no event shall more than 9 months elapse between such progress reports to The Control Authority.

b. The permit application may also contain any other information as may be necessary by The Control Authority to evaluate the permit application, including but not limited to the following:

(1) Each product produced by type, amount, process or processes and rate of production;

(2) Type and amount of raw materials processed (average and maximum per day); and

(3) Number and type of employees, and hours of operation of plant and proposed or actual hours of operation of the Significant Industrial users pretreatment facility.

c. The Control Authority will evaluate the data furnished by the Significant Industrial User and may require additional information. After evaluation and acceptance of the data furnished, The Control Authority may issue a Wastewater Contribution Permit subject to terms and conditions provided herein.

4.2.3 Permit Modification

Within 9 months of the promulgation of a National Categorical Pretreatment Standard, the Wastewater Contribution Permit of Significant Industrial users subject to such standards shall be revised to require compliance with such standards within the time frame prescribed by such standard. Where a Significant Industrial User, subject to a National Categorical Pretreatment Standard, has not previously submitted an application for a Wastewater Contribution Permit, as required by 4.2.2 of the Ordinance,

the Significant Industrial User shall apply for a Wastewater Contribution permit within 180 days after the promulgation of the Applicable National Categorical Pretreatment Standard. In addition, the Significant Industrial user with an existing Wastewater Contribution Permit shall submit to The Control Authority within 180 days after the promulgation of an applicable Federal Categorical Pretreatment Standard the information required by paragraph (8) and (9) of Section 4.2.2 of this Ordinance.

4.2.4 Permit Conditions:

a. Wastewater Contribution Permits shall be expressly subject to all provisions of this Ordinance and all other applicable regulations, Significant Industrial user charges and fees established by The City. Permits shall contain the following:

- (1) Statement of permit duration;
- (2) Statement of non-transferability without, at a minimum, prior notification to The Control Authority;
- (3) Applicable effluent limits or Categorical Pretreatment Standards, if applicable;
- (4) Applicable self-monitoring, sampling, reporting, and record keeping requirement, including sampling location, sampling frequency, sample type, and standards for tests and reporting schedule.
- (5) Notification requirements for Slug Discharges and Bypasses as contained in Sections 2.8. and 2.9. of this Ordinance.
- (6) Statement of applicable civil and criminal penalties for violation of the pretreatment standards and requirements, and applicable compliance schedule(s).

b. Permits may contain one or more of the following:

- (1) The unit charge or schedule of the Significant Industrial Users charges and fees for the wastewater to be discharged;

(2) Limits on the average and maximum wastewater constituents and characteristics;

(3) Limits on average and maximum rate and time of discharge or requirements for flow regulations and equalization;

(4) Requirements for installation and maintenance of inspection and sampling facilities;

(5) Requirements for submission of technical reports or discharge reports. See, Section 4.3. of this Ordinance.

(6) Requirements for maintaining and retaining plant records relating to wastewater discharge as specified by The Control Authority, and affording The Control Authority access thereto;

(7) Requirements for notification of The Control Authority of any discharge, including a slug discharge, that could cause problems to the POTW; of any violation within 24 hours of becoming aware of the violation; and of any new introduction of wastewater constituents or any substantial change in the volume or character of pollutants in their discharge, including the listed or characteristic hazardous wastes for which the Significant Industrial User has submitted initial notification under 40 CFR 403.12(p);

(8) Compliance schedules; or

(9) Other conditions as deemed appropriate by The Control Authority to insure compliance with this Ordinance.

4.2.5 Permits Duration:

Wastewater Contribution Permits shall be issued for a specified time period, not to exceed five (5) years. A permit may be issued for a period less than a year or may be stated to expire on a specific date. The Significant Industrial User shall apply for permit reissuance no later than 180 days prior to the expiration of the Significant Industrial Users existing permit. The terms and conditions of the permit may be subject to modification by The Control Authority during the term of the permit if the limitations

or requirements as identified in Section 2 of this Ordinance are modified or for other just cause. The Significant Industrial User shall be informed of any proposed changes in his permit at least 30 days prior to the effective date of change. Any changes or new conditions in the permit shall include a reasonable time schedule for compliance.

4.2.6 Permit Transfer:

Wastewater Contribution Permits are issued to a specific Significant Industrial user for a specific operation. A wastewater discharge permit shall not be reassigned or transferred to a new owner, new Significant Industrial User, without, as a minimum, providing The Control Authority:

- 1) 30 days advance notice of an intent to transfer or assign; 2) a certified statement by the assignee or transferee that upon the permits assignment or transfer, there will be not change in the operation of the facility so as to, in any way, affect the quantity and quality of the wastewater discharged to the POTW and 3) a copy of the existing individual control mechanism is provided to the transferee or assignee. All other transfers, assignments, change in premises or change in operations will require the prior approval of The Control Authority before the Wastewater Contribution Permit will become effective. Any succeeding owner or Significant Industrial User shall also comply with the terms and conditions of the existing permit.

4.3 Reporting Requirements for Permittee

4.3.1 Baseline Monitoring Reports

Within 180 days after the effective date of a Categorical Pretreatment Standard, or 180 days after a final administrative decision made upon the application of an appropriate Categorical Pretreatment Standard, whichever is later, an existing user subject to such categorical Pretreatment Standards and currently discharging to or scheduled to discharge to a POTW shall be required to submit to The Control Authority a Baseline Monitoring Report. This Baseline Monitoring Report shall contain all of the information required in 40 CFR 403.12(b)(1)-7.

At least 90 days prior to the commencement of discharge, New Sources, and sources that become Users subsequent to the promulgation of an applicable Categorical Standard, shall submit to The Control Authority a Baseline Monitoring Report which contains all the information listed in paragraphs 40 CFR 403.12(b)(1)-(5). New Sources shall also be required to include in their Report information on their method of pretreatment intended to be used in meeting their applicable pretreatment standards.

4.3.2 Compliance Date Report

Within 90 days following the date for final compliance with applicable pretreatment standards or, in the case of a New Source, following commencement of the introduction of wastewater into the POTW, any Significant Industrial user subject to pretreatment standards and requirements shall submit to The Control Authority a report indicating the nature and concentration of all pollutants in its discharge which are limited by pretreatment standards and requirements and their average and maximum daily flow. The report shall state whether the applicable pretreatment standards or requirements are being met on a consistent basis and, if not, what additional O&M and/or pretreatment is necessary to bring the Significant Industrial User into compliance with the applicable pretreatment standards or requirements. This statement shall be signed by an authorized representative of the Significant Industrial User. Any data presented as part of the report shall be prepared and certified by a certified laboratory and should any pretreatment be proposed or required, a registered engineer shall prepare and certify his/her involvement in the proposed pretreatment facility. Any person signing a submittal to The Control Authority shall make the following certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with procedures designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage this facility, or those persons directly responsible for gathering 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.

4.3.3 Periodic Compliance Reports

a. Any Significant Industrial User subject to a pretreatment standards, after the compliance date of such pretreatment standards, or, in the case of a New Source, after commencement of the discharge into the POTW, and any noncategorical Significant Industrial User shall submit to The Control Authority during the months of June and December, unless required more frequently by the Control Authority, a report indicating the nature, concentration and flow of pollutants in the effluent which are limited by such pretreatment standards. At the discretion of The Control Authority and in consideration of such factors as local high or low flow rates, holidays, budget cycles, etc., The Control Authority may agree to alter the months for report submittal.

b. The Control Authority may impose equivalent mass limitations of Significant Industrial Users where the imposition of mass limitations is appropriate. In such cases, the report required by subparagraph 1) of this paragraph shall indicate the mass of pollutants regulated by pretreatment standards in the effluent of the Significant Industrial user. These reports shall contain the results of sampling and analysis of the discharge, including the flow and the nature and concentration, or production and mass where requested by The Control Authority, of pollutants contained therein which are limited by the applicable pretreatment standards. The frequency of monitoring shall be the same as above.

4.4 Monitoring Factors

a. The Control Authority may require, to be provided and operated at the users own expense, monitoring facilities to allow inspection, sampling, and flow measurement of the building sewer and/or internal drainage systems. The monitoring facility should normally be situated on the Users premises, but The Control Authority may, when such a location would be impractical or cause undue hardship on the User, allow the facility to be constructed in the public street or sidewalk area and located so that it will not be obstructed by landscaping or parked vehicles.

b. There shall be ample room in or near such sampling manhole or facility to allow accurate sampling and preparation of samples for analysis. The facility, sampling, and measuring equipment shall be maintained at all times in a safe and proper operating condition at the expense of the User.

c. Whether constructed on public or private property, the sampling and monitoring facilities shall be provided in accordance with The Control Authority's requirements and all applicable local construction standards and specifications. Construction shall be completed within 90 days following written notification by The Control Authority.

4.5 Inspection and Sampling:

The Control Authority shall inspect the facilities of any user to ascertain whether the purpose of this Ordinance is being met and all requirements are being complied with. Persons or occupants of premises where wastewater is created or discharged shall allow The Control Authority, and other approval authorities, or their representatives, ready access at all reasonable times to all parts of the premises for the observation of any User personnel in the performance of any of their duties. All records of the facility pertaining in any way to the provisions of this Ordinance may be photocopied by The Control Authority and the copies removed from the facility's premises. EPA, The City or the State of Arkansas shall have the right to set up on the User's property such devices as are necessary to conduct sampling, inspection, compliance monitoring and/or metering operations. Where a user has security measures in force which would require proper identification and clearance before entry into their premises, the user shall make necessary arrangements with their security guards so that upon presentation of suitable identification, personnel from The City, The Control Authority, the State or EPA will be permitted to enter, without delay, for the purposes of performing their specific responsibilities.

4.6 Sampling and Analytical Procedures:

a. All grab or composite sampling shall be done in accordance with 40 CFR 403, Appendix E - Sampling Procedures.

b. All analysis shall be performed in accordance with procedures established by the approval authority pursuant to Section 304(h) of the Act and contained in 40 CFR, Part 136 and amendments thereto or with any other test procedures approved by the Approval Authority. Sampling shall be performed in accordance with the techniques approved by the Approval Authority.

c. Where 40 CFR part 136 does not include a sampling or analytical technique for the pollutant in question, sampling and analysis shall be performed in accordance with the procedures set forth in the EPA publication, Sampling and Analysis Procedures for Screening of Industrial Effluents for Priority Pollutants, April, 1977, and amendments thereto, or with any sampling or analytical procedure approved by the Approval Authority.

4.7 Pretreatment:

Users shall provide any and all pretreatment as necessary to comply with this Ordinance, their Wastewater Contribution Permit, all applicable State and Federal requirements and if applicable, Federal Categorical Pretreatment Standards within the time limitations as specified by the Federal Categorical Pretreatment Standards within the time limitations as specified by the Federal Pretreatment Regulations. Any facility required to pretreat wastewater to a level acceptable to The Control Authority shall provide, operate, and maintain a pretreatment facility at the Significant Industrial Users expense. Detailed plans showing the pretreatment facility and operating procedures shall be submitted to The Control Authority for review, and shall be acceptable to The Control Authority before construction of the facility. The review of such plans and operating procedures will in no way relieve the Significant Industrial user from the responsibility of modifying the facility as necessary to produce an effluent acceptable to The Control Authority under the provisions of this Ordinance. Any subsequent changes in the pretreatment facility or method of operation shall be reported to and be acceptable to The Control Authority prior to the Significant Industrial Users initiation of the changes.

4.8 Significant Noncompliance:

a. A User is in significant noncompliance if it meets one or more of the criteria as stated in 40 CFR 403,8(f)(2)(vii).

b. All records relating to compliance with pretreatment standards shall be made available to officials of the EPA or approval authority upon request.

4.9 Confidential Information:

a. Information and data on a user obtained from reports questionnaires, permit applications, permit and monitoring programs and from inspections, shall be available to the public or other governmental agency without restriction unless the User specifically requests, and is able to demonstrate to the satisfaction of The Control Authority, that the release of such information would divulge information, processes or methods of production entitled to protection as trade secrets of the User.

b. When requested by the person furnishing a report, the portions of a report which might disclose trade secrets or secret processes shall not be made available for inspection by the public but shall be made available upon written request to governmental agencies for uses related to this Ordinance, the National Pollutant Discharge Elimination System (NPDES) Permit, State Disposal System permit and/or the Pretreatment Programs; Provided, however, that such portions of a report shall be available for use by the State or any state agency in judicial review or enforcement proceedings involving the person furnishing the report. Wastewater constituents and characteristics will not be recognized as confidential information.

c. Information accepted by The Control Authority as confidential, shall not be transmitted to any governmental agency or the general public by The Control Authority until and unless a ten-day notification is given to the User.

SECTION 5 - ENFORCEMENT

5.1. Notification of Violation:

Whenever The Control Authority finds that any User has violated or is violating this Ordinance, Wastewater Contribution Permit, or any prohibition, limitation or requirements contained therein or applicable state or Federal laws or regulations, The Control Authority may serve upon such person a written notice stating the nature of the violation. Within 30 days of the date of the notice, a plan for the satisfactory correction and prevention, to include specific required actions, shall be submitted to The Control Authority by the User. Submission of this plan in no way relieves the User of liability for any violation occurring before or after receipt of Notice of Violation.

5.2 Consent Agreement:

The Control Authority is hereby empowered to enter into Consent Agreement, assuring voluntary compliance, or other similar documents as an agreement with the user responsible for the noncompliance. Such agreements will include specific action to be taken by the User to correct the noncompliance within a time period also specified by the agreement.

5.3 Show Cause Hearing:

a. The Control Authority may order any User who causes or allows an unauthorized discharge to enter the POTW or who violates any of the conditions of this Ordinance, the permit, or applicable state or Federal laws or regulations to show cause before The Control Authority why the proposed enforcement action should not be taken. Notice shall be served on the User specifying the time and place of the show cause hearing, the reasons why the action is being taken, the proposed enforcement action, and a request that the User show cause why this proposed enforcement action should not be taken. The notice of hearing shall be served personally or by registered or certified mail (return receipt requested) at least ten (10) days before the hearing. Service may be made on any agent or officer of a corporation. If a duly notified User fails to appear as noticed, immediate enforcement action may be pursued.

b. The Control Authority may itself conduct the show cause hearing and take the evidence, or may designate

any of its board members or any officer or employee of The Control Authority to:

(1) Issue in the name of The Control Authority notices of hearings requiring the attendance and testimony of witnesses and the production of evidence relevant to any matter involved in such hearings;

(2) Take the evidence; and

(3) Transmit a report of the evidence and hearing, including transcripts and other evidence, together with recommendations to the Supervisor of The Control Authority for action thereon.

c. At any hearing held pursuant to this Ordinance, testimony taken must be under oath and recorded stenographically. The transcript, so recorded, will be made available to any member of the public or any party to the hearing upon payment of the usual charges thereof (i.e. postage, printing expense, etc.)

d. Following the show cause hearing, The Control Authority shall within 15 days following the recommendation of the hearing officer issue and have served on all parties the action recommended. If warranted, The Control Authority shall recommend to the City Council, after setting forth the findings of fact, that the City Attorney pursue legal action; including civil action to recover the recommended penalties for the violation, injunctive relief and/or criminal prosecution. Alternatively, The Control Authority may issue to the User in violation, notice that following a specified period of time, the sewer service will be discontinued unless its pretreatment facility shall have installed adequate devices or other related appurtenances and such devices or other related appurtenances are properly operated. Other orders and directives as are necessary and appropriate may be issued.

e. An order directing the cessation of sewer service shall not prelude a recommendation for legal action to The City.

5.4 Administrative Orders:

5.4.1 Compliance Orders:

When The Control Authority finds that a user has violated or continues to violate this Ordinance, its Wastewater Contribution Permit or orders issued thereunder, The Control Authority may issue an order to the User responsible for the violation that states that following a specified time period, sewer service shall be discontinued unless Users pretreatment facility has installed devices or other appurtenances and are properly operated. Compliance orders may also contain such other requirements as might be reasonably necessary and appropriate to address the noncompliance, including, but not limited to, the installation of pretreatment technology, additional selfmonitoring and management practices.

5.4.2 Cease and Desist Orders:

When The Control Authority finds that a User has violated or continues to violate this Ordinance, its Wastewater Contribution Permit or order issued thereunder, The Control Authority may issue an order to cease and desist all such violations and direct the User in noncompliance to comply forthwith, if necessary The Control Authority may take such appropriate preventive or remedial action as may be needed to properly address a continuing or threatened violation, including halting operations and terminating discharge.

5.5 Emergency Authority:

a. The Control Authority, following only oral notice to the User, may suspend the wastewater treatment service or the Wastewater Contribution Permit of any person when, in the opinion of the Supervisor of The Control Authority, such suspension is necessary to immediately and effectively halt or prevent any actual or threatened discharge which presents, or may present, an imminent or substantial endangerment to the health, safety or welfare of persons.

b. The Control Authority, following a notice with the opportunity to respond, may halt or prevent any discharge to the POTW which presents or may present an endangerment to the environment or which threatens to interfere with the operation of the POTW.

c. Any User notified of a suspension of its wastewater treatment service and/or its Wastewater Contribution Permit shall immediately stop or eliminate the harmful discharge. In the event of a failure of the User to comply voluntarily with the demand for cessation, The Control Authority shall take such steps as deemed necessary, including immediate severance of the sewer connection, to prevent the endangering discharge. The Control Authority may reinstate the Wastewater Contribution Permit and/or the wastewater treatment service upon proof of the elimination of the endangering discharge, together with an acceptable detailed written statement submitted by the User describing the cause of the harmful discharge and the measures taken to prevent any future occurrence. The proof and required statements must be submitted to The Control Authority within 15 days of the date of endangering discharges occurrence.

5.6 Revocation of Permits:

a. Any Significant Industrial User who violates any of the following conditions or requirements of this Ordinance, or applicable state and federal laws or regulations or any provisions of its Wastewater Contribution Permit is subject to having his permit revoked:

(1) Violation of Wastewater Contribution Permit conditions.

(2) Failure to accurately report the wastewater constituents and characteristics of its discharge.

(3) Failure to report significant changes in operations or wastewater constituents and characteristics.

(4) Refusal of reasonable access to the Significant Industrial Users premises for the purpose of inspection, monitoring or sampling.

b. A noncompliant Significant Industrial User will be notified of the proposed termination of its Wastewater Contribution Permit and offered an opportunity to show cause pursuant to Section 5.3 of this Ordinance why the proposed action should not be taken.

5.7 Judicial Remedies:

If any User discharges sewage, industrial wastes or other wastes into the POTW contrary to the provisions of this Ordinance, any other applicable ordinances, federal or state Pretreatment Requirements, or any order of The City or The Control Authority, or otherwise violates provisions of this Ordinance, the Wastewater Contribution Permit, or applicable laws and regulations, The Control Authority may recommend to the City Council that the City Attorney commence action for appropriate legal and/or equitable relief in a court of competent jurisdiction.

5.7.1 Injunctive Relief:

Whenever a User has violated or continues to violate the provisions of this Ordinance or its Wastewater Contribution Permit or orders issued thereunder, The Control Authority may request that the City Attorney immediately petition the Court for the issuance of a preliminary or permanent injunction, or both, as may be appropriate to restrain or compel the activities of the User.

5.7.2 Civil Penalties:

a. Any User who is found to have violated or continues to violate an order of The City and/or The Control Authority or who negligently failed to comply with any provisions of this Ordinance or the orders, rules, regulations and permits issued thereunder, may be fined not more than One Thousand Dollars (\$1,000.00) for each offense. Jurisdiction to determine such penalties shall be in the City Municipal Court or other court of appropriate jurisdiction. Each day on which a violation shall occur or continue shall be a separate and distinct offense.

b. In addition to the civil penalties provided for herein, The City may recover, from the user in violation, any damages suffered, reasonable attorneys fees, court costs, court reporters fees and other expenses of litigation in any action in law or equity against any person or other entity.

c. The City Attorney shall petition the Court to impose, assess and recover all civil penalties, legal

fees, and costs together with damages if appropriate. In determining the amount of the penalty, The Control Authority in its recommendation for civil penalties, the City Council and the Court shall take into account all relevant circumstances, including, but not limited to, the extent of harm caused by the violation, the magnitude and duration of the violation, any economic benefit gained by the user in allowing the violation, the timing and nature of any corrective actions taken by the User, the compliance history of the User and any other factors as justice requires.

5.8 Criminal Prosecution:

a. The Control Authority may recommend to the City Council that the City Attorney criminally prosecute any User who knowingly or willfully violates any provision of this ordinance, its Wastewater Contribution Permit or any orders issued thereunder. If so prosecuted the User shall, upon conviction, be guilty of a misdemeanor, and punished by a fine not to exceed \$1,000.00 per violation per day or imprisonment for not more than six (6) months, or both.

b. Any person who knowingly or willfully makes any false statement, representation or certification in any application, record, report, plan or other document filed or required to be maintained pursuant to this Ordinance or its Wastewater Contribution Permit, or who falsifies, tampers with, or knowingly or willingly renders inaccurate any monitoring or sampling device, wastewater sample or other methods required under this Ordinance, shall be guilty of a misdemeanor, and shall, upon conviction, be punished by a fine of not more than \$1,000.00 or by imprisonment for not more than six (6) months or both.

5.9 Supplemental Enforcement Remedies:

5.9.1 Annual Publication of Users in Significant Noncompliance:

The Control Authority shall publish, at least annually in the largest daily newspaper circulated in the area, a description of those Users which are found to be in Significant Noncompliance as defined in 40 CFR 403.8(f)(2)(vii) with any provisions of this Ordinance or

any permit or order issued thereunder during the period since the previous publication.

5.9.2 Performance Bonds:

The Control Authority may decline to reissue a Wastewater Contribution Permit to any Significant Industrial user which has failed to comply with the provisions of this Ordinance or any order or previous permit issued thereunder unless such Significant Industrial User files with The Control Authority a satisfactory bond payable to The City in a sum not to exceed an amount determined by The Control Authority to be necessary to achieve consistent compliance.

SECTION 6 - SEVERABILITY

If any provision, paragraph, word, section, chapter, or article of this Ordinance is invalidated by any court of competent jurisdiction, the remaining provisions, paragraphs, words, sections, chapters, and articles shall not be affected and shall continue in full force and effect.

SECTION 7 - AMENDED

As of the effective date of this Ordinance, all other Ordinances or parts of Ordinances in conflict with this Ordinance are amended.

SECTION 8 - EFFECTIVE DATE

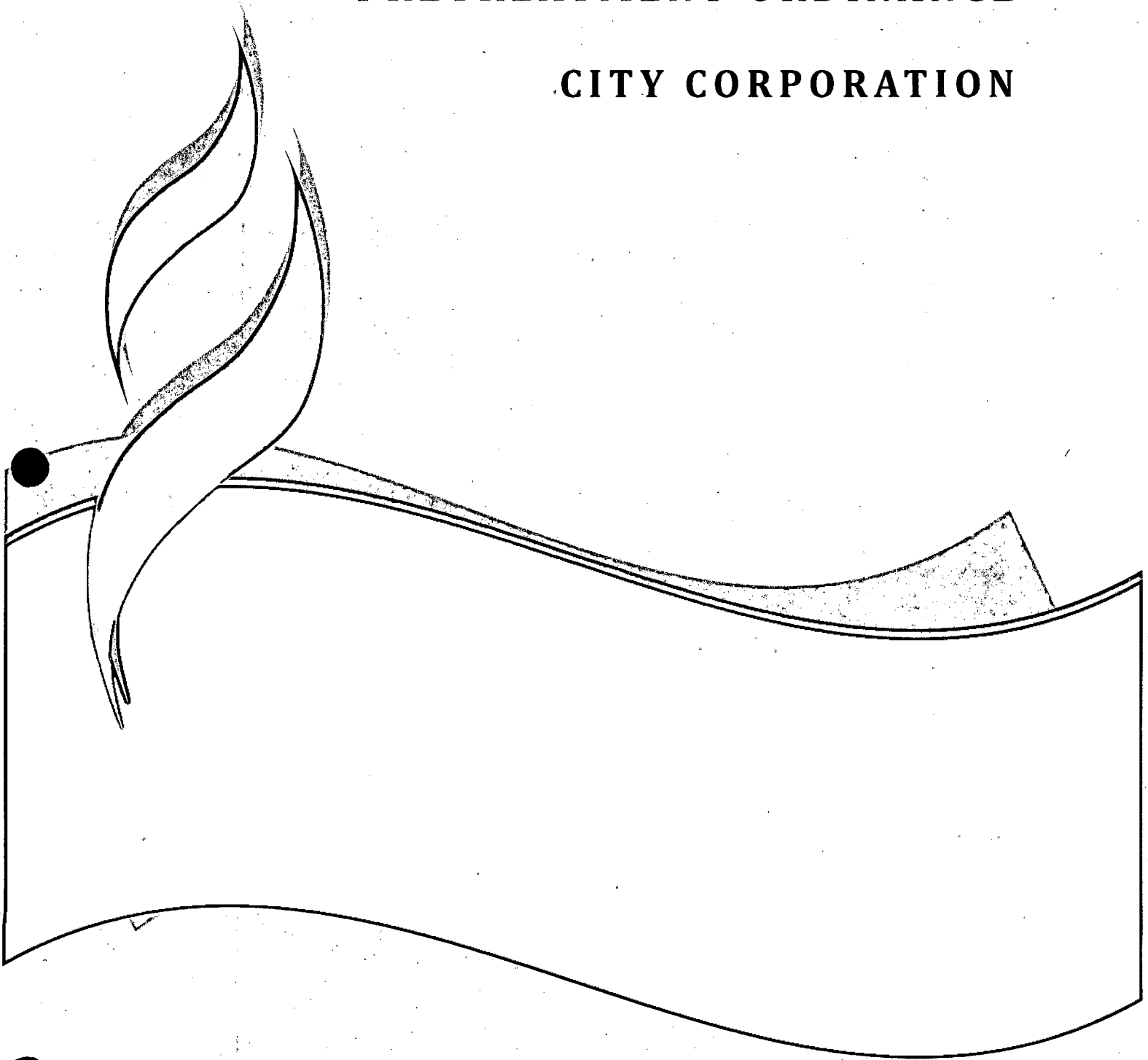
This Ordinance being necessary for the health, safety and welfare of the citizens of Russellville, an emergency is declared to exist, and this Ordinance shall take effect and be enforced from and after its passage, approval and publication, as provided by law.

PASSED AND APPROVED this 13th day of February, 1992.

2105

PRETREATMENT ORDINANCE

CITY CORPORATION



ORDINANCE NO.

AN ORDINANCE SETTING FORTH UNIFORM REQUIREMENTS FOR DIRECT AND INDIRECT CONTRIBUTORS INTO THE WASTEWATER COLLECTION AND TREATMENT SYSTEM FOR THE CITY OF RUSSELLVILLE AND ENABLING THE CITY TO COMPLY WITH ALL APPLICABLE STATE AND FEDERAL LAWS REQUIRED BY THE CLEAN WATER ACT OF 1977 AND THE GENERAL PRETREATMENT REGULATIONS (40 CFR PART 403).

SECTION 1 - GENERAL PROVISIONS

1.0 Short Title: This Ordinance shall also be known as the Pretreatment Ordinance.

1.1 Purpose and Policy:

a. This Ordinance sets forth uniform requirements for direct and indirect contributors into the wastewater collection and treatment system for the City of Russellville (the City) and enables the City to comply with all applicable State and Federal laws required by the Clean Water Act (33 United States Code [U.S.C.] section 1251 et seq) and the General Pretreatment Regulations (Title 40 of the *Code of federal Regulations* [CFR] Part 403.

b. The objectives of this Ordinance are:

(1) To prevent the introduction of pollutants into the City's wastewater treatment and collection system which will interfere with the operation of the system or contaminate the resulting sludge;

(2) To prevent the introduction of pollutants into the City's wastewater treatment and collection system which will pass through the system, inadequately treated, into receiving waters or the atmosphere or otherwise be incompatible with the system;

(3) To improve the opportunity to recycle and reclaim wastewater and sludge from the City's wastewater treatment system;

(4) To enable the City to comply with its National Pollutant Discharge Elimination System permit conditions, sludge use and disposal requirements, and any other Federal or State laws to which the Public Owned Treatment Works is subject;

(5) To protect both Publicly Owned Treatment Works personnel who may be affected by wastewater and sludge in the course of the employment and the general public; and

(6) To provide for fees for the equitable distribution of the cost of operation, maintenance, and improvement of the Public Owned Treatment Works

c. This Ordinance provides for the regulation of direct and indirect contributors into the City's POTW through the issuance of permits to certain non-domestic Users, the enforcement of general requirements for the other Users, authorized monitoring and enforcement activities, required User reporting, and the assumption that existing customers capacity will not be preempted, and provides for the setting of fees for the equitable distribution of cost resulting from the program established herein.

d. The terms and provisions of this Ordinance shall apply to all connections of lateral or other sewer lines to the sewerage system of the POTW whether within or outside the City and to all persons within the City and outside the City who are, by contract or agreement with the City, Users of the City's POTW.

e. It is in the best interest of the City, to clarify and update the provisions of its existing wastewater Ordinance by the provisions of this Ordinance, so as to achieve compliance with the Clean Water Act and the regulations pursuant thereto, 40 CFR Part 403 as amended July 24, 1990. It is therefore intended that this Ordinance shall take precedence over any term or condition of agreements or contracts of the City or the Control Authority which are inconsistent with the provisions of this Ordinance, and over any and all inconsistent terms and conditions of any previous Ordinance.

f. Except as otherwise provided herein, the Control Authority is hereby authorized to administer, implement and enforce the provisions of this Ordinance. The National Pollution Discharge Elimination System (NPDES) permit shall be issued in the name of the Control Authority. The Control Authority as of the date of this Ordinance is City

Corporation, a non-profit corporation established by City Resolution in April 1985. The City shall be responsible for all legal action necessary to enforce the provisions of this Ordinance.

1.2 Definitions

a. Unless the context specifically indicates otherwise, the following terms and phrases, as used in this Ordinance, shall have the meanings hereinafter designated:

(1) Act or the Act: The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, Title 33 U.S.C. 1251, et. seq.

(2) Approval Authority: The Director of the Arkansas Department of Environmental Quality.

(3) Authorized Representative of a User:

a. If the user is a Corporation:

1. The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function for the corporation; or
2. The manager of one or more manufacturing, production, or operation facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for individual wastewater discharge permit requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b. If the User is a partnership or sole proprietorship, a general partner or proprietor, respectively.

c. If the User is a Federal, State, or local governmental facility: a director or highest official appointed or designated to oversee the operation and performance of the activities of the government facility, or their designee.

d. The individuals described in paragraphs a through c, above, may designate a Duly Authorized Representative if the authorization is in

writing, the authorization specifies the individual or position responsible for the overall operation of the facility from which the discharge originates or having overall responsibility for environmental matters for the company, and the written authorization is submitted to the Control Authority.

(4) Best Management Practices or BMPs means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to implement the prohibitions listed in Section 2.1 a and b. BMPs include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

(5) Biochemical Oxygen Demand (BODs): The quantity of oxygen utilized in the biochemical oxidation of organic matter under laboratory condition of five (5) days at 20 degrees centigrade and expressed in terms of mass loading or concentration.

(6) Bypass: The intentional diversion of wastewater from any portion of a user's pretreatment facility.

(7) Categorical Pretreatment Standard or Categorical Standard: Any regulation containing pollutant discharge limits promulgated by EPA in accordance with sections 307(b) and (c) of the Act (33 U.S.C. section 1317) that apply to a specific category of Users and that appear in 40 CFR Chapter I, Subchapter N, Parts 405-471.

(8) Categorical Industrial User: An Industrial User subject to a categorical Pretreatment Standard or categorical Standard.

(9) City: The City of Russellville, City Corporation or the City Council.

(10) Chemical Oxygen Demand (COD): A measure of the total oxygen consuming capacity of inorganic and organic matter present in the water or wastewater expressed in mass loading or concentration.

(11) Composite Sample: A sampling procedure defined in 40 CFR 403, Appendix E - Sampling Procedures, I. Composite Method.

(12) Control Authority: Under the provisions of 40 CFR 403.3(f) the Control Authority is charged with the

administration, operation and maintenance of the POTW and enforcement of the provisions of this Ordinance. As of the date of this Ordinance, Control Authority is City Corporation, a City owned utility.

(13) Control Mechanism: Control through permits, orders or other means the contribution of each Significant Industrial user to the POTW to ensure compliance with applicable pretreatment standards and regulations.

(14) Direct Discharge: The discharge of treated or untreated wastewater directly to the waters of the State of Arkansas.

(15) Daily Discharge: The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.

Mass Calculations: For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of pollutant discharged over the sampling day.

Concentration Calculations: For pollutants with limitations expressed in other units of measurement, determination of concentration made using a composite sample shall be the concentration of the composite sample.

When grab samples are used, the "daily discharge" determination of concentration shall be the arithmetic average (weighted by flow value) of all the samples collected during that sampling day by using the following formula: where c = daily concentration, F = daily flow and n = number of daily samples:

$$C_1F_1 + C_2F_2 + \dots + C_nF_n / F_1 + F_2 + \dots + F_n$$

(16) Daily Maximum Limit (Daily Maximum): The highest allowable daily discharge during a calendar month.

(17) Environmental protection Agency (EPA): The U.S. Environmental Protection Agency, or where appropriate The Regional Water Management Division Director, the regional Administrator, or other duly authorized official of said agency.

(18) Existing Source: Any source of discharge that is not a "New Source."

(19) **Grab Sample:** A sampling procedure defined in 40 CFR 403, Appendix E - Sampling Procedures, II. Grab Method.

(20) **Holding Tank Waste:** Any waste from holding tanks - such as vessels, chemical toilets, campers, trailers, septic tanks, and vacuum pump trucks.

(21) **Indirect Discharge or Contribution:** The discharge or contribution of non-domestic pollutants from any source, including holding tank wastes to the POTW.

(22) **Industrial User (or User):** A source of indirect discharge.

(23) **Instantaneous Limit:** The maximum concentration of a pollutant allowed to be discharged at any time, determined from the analysis of any discrete or composited sample collected, independent of the industrial flow rate and the duration of the sampling event.

(24) **Interference:** The inhibition or disruption of the POTW treatment processes or operations which contribute to a violation of any requirement of the City's NPDES permit or causes harm to the POTW. The term includes the prevention of sewage sludge use or disposal by the POTW in accordance with Section 405 of the Act, Title 33 U.S.C. 1345, or any criteria, guidelines, or regulations developed pursuant to the Solid Waste Disposal Act (SWDA), the Clean Air Act, the Toxic Substances Control Act, or more stringent state criteria (including those contained in any State sludge management plan prepared pursuant to Title IV of SWDA) applicable to the method of disposal or use employed by the POTW.

(25) **Local Limit:** Specific discharge limits developed and enforced by the Control Authority upon industrial or commercial facilities to implement the general and specific discharge prohibitions listed in 40 CFR 403.5 (a)(1) and (b).

(26) **Medical Waste:** Isolation wastes, infectious agents, human blood and blood products, pathological wastes, sharps, body parts, contaminated bedding, surgical wastes, potentially contaminated laboratory wastes, and dialysis wastes.

(27) **Monthly Average:** The sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

(28) Monthly Average Limit: The highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

(30) New Source: Any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced after the publication of proposed pretreatment standards under Section 307(c) of the Act which will be applicable to such source if such Standards are thereafter promulgated in accordance with that Section, provided that:

- (a) The building, structure, facility, or installation is constructed at a site at which no other source is located; or
- (b) The building, structure, facility, or installation totally replaces the process or production equipment that causes the discharge of pollutants at an Existing Source; or
- (c) The production or wastewater generating processes of the building, structure, facility, or installation are substantially independent of an Existing Source at the same time. In determining whether these are substantially independent, factors such as the extent to which the new facility is integrated with the existing plant, and the extent to which the new facility is engaged in the same general type of activity as the Existing Source, should be considered.

1. Construction on a site at which an Existing Source is located results in a modification rather than a New Source if the construction does not create a new building, structure, facility, or installation meeting the criteria of Section (29)(b) or (c) above but otherwise alters, replaces, or adds to the existing process or production equipment.

2. Construction of a New Source as defined under this paragraph has commenced if the owner or operator has:

- a. Begun, or caused to begin, as part of a continuous onsite construction program (1) any placement, assembly, or installation of facilities or equipment; or (2) significant site preparation work

including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the replacement, assembly, or installation of new source facilities or equipment: or

- b. Entered into a binding contractual obligation for the purchase of facilities or equipment which are intended to be use in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.

(31) National Pollution Discharge Elimination System Permit or (NPDES): A permit issued pursuant to Section 402 of the Clean Water Act, Title 33 U.S.C. 1342, which establishes limits on the quality and quantity of discharges to the waters of the State.

(32) Noncontact Cooling Water: Water used for cooling that does not come into direct contact with any raw material, intermediate product, waste product, or finished product.

(33) Pass Through: A discharge which exits the POTW into the waters of the State in quantities or concentration levels which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the Control Authority's NPDES permit or increases the magnitude or duration of a violation.

(34) Person: Any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, governmental entity or any other legal entity, or their legal representatives, agents or assigns. The masculine gender shall include the feminine, the singular shall include the plural where indicated by the context.

(35) pH: A measure of the acidity of a liquid and expressed as the negative logarithm (base 10) of the

hydrogen ion concentration, and stated in standard units (Sus).

(36) Pollution: The man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.

(37) Pollutant: Any dredge spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, medical wastes, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.

(38) Pretreatment or Treatment: The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutants, or the alteration of the nature of pollutant properties in wastewater to a less harmful state, prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW. The reduction or alteration can be obtained by physical, chemical or biological processes, or process changes by other means, except by diluting the concentration of the pollutant unless allowed by an applicable Pretreatment Standard.

(39) Pretreatment Requirements: Any substantive or procedural requirements related to pretreatment, including those imposed on a Users, other than a Pretreatment Standards.

(40) Pretreatment Standards or Standards: Prohibited discharge standards, categorical Pretreatment Standards, and Local Limits.

(41) Prohibited Discharge Standards or Prohibited Discharges: Absolute prohibitions against the discharge of certain substances; these prohibitions appear in Section 2.1 of this Ordinance.

(42) Publicly Owned Treatment Works (POTW): The treatment works, as defined by Section 212 of the Act, Title 33 U.S.C. 1292, which is owned by the City. This definition includes the treatment plant and any sewers that convey wastewater to the POTW treatment plant, but does not include pipe, sewers or other conveyances

not connected to a facility providing treatment. For the purposes of this Ordinance, the POTW shall also include any sewers that convey wastewaters to the POTW from persons outside the City of Russellville who are, by contract or agreement with the City, users of the City's POTW.

(43) POTW Treatment Plant: That portion of the POTW designed to provide treatment to wastewater.

(44) Septic Tank Waste: Any sewage from holding tanks such as vessels, chemical toilets, campers, trailers, and septic tanks.

(45) Sewage: Human excrement and gray water (household showers, dishwashing operations, ect.).

(46) Shall is mandatory; May is permissive.

(47) Significant Industrial User (SIU): Any User of the POTW subject to Categorical Pretreatment Standards; or any other user that discharges an average flow of 25,000 gallons per work day or more of process wastewater to the POTW (excluding sanitary, non-contact cooling and boiler blowdown wastewater); contributes a process waste stream which makes up 5% or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated a Significant Industrial User by The Control Authority, on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement.

A. The Control Authority may determine that an Industrial User subject to categorical Pretreatment Standards is a Non-Significant Categorical Industrial User rather than a Significant Industrial User on a finding that the Industrial User never discharges more than 100 gallons per day (gpd) of total categorical wastewater (excluding sanitary, non-contact cooling and boiler blowdown wastewater, unless specifically included in the Pretreatment Standard) and the following conditions are met:

1. The Industrial User, prior to the Control Authority's finding, has consistently complied with all applicable categorical Pretreatment Standards and Requirements;
2. The Industrial User annually submits the certification statement required in 40 CFR 403.12(q), together with any additional information necessary to support the certification statement; and
3. The Industrial User never discharges any untreated concentrated wastewater.

B. Upon a finding that a User meeting the criteria for Industrial User has no reasonable potential for adversely affecting the POTW's operation or for violation any Pretreatment Standard or Requirement, the Control Authority may at any time, on its own initiative or in response to a petition received from an Industrial User, and in accordance with procedures in 40 CFR 403.8(f)(6), determine that such User should not be considered a Significant Industrial User.

(48) Significant Noncompliance (SNC): See, Section 4.8.a of this Ordinance.

(49) Slug Discharge: Any discharge at a flow rate or concentration, which could cause a violation of the prohibited discharge standards in Section 2.1 of this Ordinance. A slug discharge is any discharge of a non-routine, episodic nature, including, but not limited to, an accidental spill or non-customary batch discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violate the POTW's regulations, Local Limits or Permit conditions.

(50) State: State of Arkansas.

(51) Standard Industrial Classification (SIC): A classification pursuant to the Standard Industrial Classification Manual issued by the Executive office of the President, office of Management and Budget, 1972.

(52) Storm Water: Any flow occurring during or following any form of natural precipitation and resulting therefrom.

(53) Superintendent: The individual designated by the Control Authority to supervise the operation of the POTW, and who is charged with certain duties and responsibilities by this ordinance. The term also means a Duly Authorized Representative of the Superintendent.

(54) Total Suspended Solids (TSS): The total concentration of matter that floats on the surface of, or is suspended in, water, wastewater or other liquids, and which is removable by laboratory filtering.

(55) Total Toxic Organics (TTO): The sum of the masses or concentration of specific toxic organic compounds found in Users process discharge at a concentration greater than 0.01 mg/l.

(56) Toxic Pollutant: Any pollutant or combination of pollutants listed as toxic in regulations promulgated by the Administrator of the Environmental Protection Agency under the Section of 307(a) of the Act or other Acts.

(57) User (or Industrial User): A source of indirect discharge.

(58) Wastewater: The liquid and water-carried Industrial or domestic wastes from dwellings, commercial buildings, industrial facilities, and institutions; together with any ground water, surface water, and storm water that may be present, whether treated or untreated, which is contributed into or permitted to enter the POTW.

(59) Waters of the State: All streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the State or any portion thereof.

1.3 Abbreviations

The following abbreviations shall have the designated meanings:

ADEQ - Arkansas Department of Environmental Quality

BOD - Biochemical Oxygen Demand

CFR - Code of Federal Regulations

CIU - Categorical Industrial User

COD - Chemical Oxygen Demand

EPA - Environmental Protection Agency

l - Liter

mg - Milligrams

mg/l - Milligrams per liter
NPDES - National Pollutant Discharge Elimination System
POTW - Publicly Owned Treatment Works
SIC - Standard Industrial Classification
SIU - Significant Industrial User
SND - Significant Noncompliance
SWDA - Solid Waste Disposal Act, 42 U.S.C. 6901, et.seq.
USC - United States Code
TSS - Total Suspended Solids

SECTION 2 - REGULATIONS

2.1 Discharge Prohibitions

a. General Prohibitions. It shall be unlawful for any User to contribute or cause to be contributed, directly or indirectly, any pollutant or wastewater which will interfere with the operation or performance of the POTW, causes a pass-through, which is defined in Section 1.2.a(33) of this Ordinance, or which violates any statute, rule, regulation or ordinance of any public agency. This general prohibition applies to all such users of the POTW whether or not the User is subject to National Categorical Pretreatment Standards or any other National, State, or local pretreatment standards or requirements.

b. Specific Prohibitions. A user may not contribute the following substances to the POTW:

(1) Any liquid, solid or gas which creates singly or by interaction with other substances a fire or explosion hazard in the POTW, including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 50 degrees Centigrade using the test methods specified in 40 CFR 261.21.

(2) Any wastewater having a pH lower than 5.0 S.U. or greater than 12.0 S.U. or having any other corrosive property capable of causing corrosive structural damage or a hazard to the structures, equipment and personnel of the POTW. In no case shall waters or wastes be discharged at such a flow rate and/or pH which will cause the influent at the POTW to be lower than 6.0 or greater than 9.0.

(3) Any solid or viscous substance in amounts which will cause obstruction to the flow in the POTW or will result in Interference to the POTW.

(4) Any substance or substances, including oxygen demanding pollutants, directly or indirectly discharged at a flow rate or concentration level which will cause Interference, upset, or loss of efficiency at the POTW.

(5) Any wastewater having a temperature which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees C (104 degrees F). Any liquid or vapor having a temperature higher than 54.4 degree C (130 degree F).

(6) Any wastewater containing concentration levels or flow rates of petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through.

(7) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems.

(8) Any trucked or hauled pollutants, except at discharge points designated by the Control Authority.

(9) Any wastewater containing toxic substances in sufficient quantity, either singly or by interaction with other substances, to injure or interfere with any wastewater treatment process, constitute a hazard to humans or animals, create a toxic effect in the receiving waters or exceed the limitations set forth in a Categorical Pretreatment Standard. A toxic substance shall include but not be limited to those identified under Section 307(a) of the Act.

(10) Any substance which may cause the POTW's effluent or any other product of the POTW such as residues, sludges, or scums, to be unsuitable for reclamation and reuse or to interfere with the reclamation process. In no case, shall a substance discharged to

the POTW cause the POTW to be in noncompliance with sludge use or State or Federal disposal criteria.

(11) Any substance containing any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the Control Authority in compliance with applicable State and Federal regulations.

(12) Any substance which will cause the POTW to violate its NPDES permit or the receiving waters water quality standards.

(13) Any wastewater which may cause a hazard to human health or create a public nuisance.

(14) Storm water, surface water, ground water, artesian well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, de-ionized water, Noncontact Cooling Water, and unpolluted wastewater, unless specifically authorized by the Control Authority.

(15) Medical Wastes, no discharge of any pharmaceutical medications, prescription or 'over the counter', unused or expired.

Pollutants, substances, or wastewater prohibited by this section shall not be processed or stored in such a manner that they could be discharged to the POTW.

c. When the Control Authority determines that a User is contributing to the POTW, any of the above enumerated substances in such amounts as to Interfere with the operation of the POTW, or to cause the Control Authority to be in violation of any applicable statute, regulation or permit, the Control Authority shall:

- 1) Advise the User of the impact of the contribution on the POTW;
- 2) Develop effluent limitation for such User to correct the violation or Interference with the POTW and
- 3) Take any enforcement measures, necessary and appropriate under the circumstances.

2.2 National Categorical Pretreatment Standards:

Users must comply with the categorical Pretreatment Standards found at 40 CFR Chapter I, Subchapter N, Parts 405 - 471.

- A. When wastewater subject to a categorical Pretreatment Standard is mixed with wastewater not regulated by the same Standard. The Control Authority shall impose an alternate limit in accordance with 40 CFR 403.6(e).
- B. Where a categorical pretreatment standard is expressed only in terms of either the mass or the concentration of a pollutant in wastewater, the Control Authority may impose equivalent concentration or mass limits in accordance with 40 CFR 403.6(c).
- C. When the limits in a categorical Pretreatment Standard are expressed only in terms of mass of pollutant per unit of production, the Control Authority may convert the limits to equivalent limitations expressed either as mass of pollutant discharged per day or effluent concentration for purposes of calculation effluent limitations applicable to individual industrial Users in accordance with 40 CFR 403.6 (c)(2).
- D. When a categorical Pretreatment Standard is expressed only in terms of pollutant concentrations, an Industrial User may request that the City convert the limits to equivalent mass limits. The determination to convert concentration limits to mass limits is within the discretion of the Superintendent. The City may establish equivalent mass limits only if the Industrial User meets all the conditions as set forth in 40 DFR 403.6 (c) (5).

2.3 State Pretreatment Standards: [Reserved]

2.4 Local Limitations

- a. The Control Authority is authorized to establish Local Limits pursuant to 40 CFR 403.5(c).
- b. No person shall discharge any waters or wastes at a concentration that would exceed the concentration of pollutants, including but not limited to, those identified in the most recent "Technically Based Local Limits Development Document" in accordance with the requirements in NPDES Permit AR0021768, and adopted by the Control Authority and approved by the Arkansas

Department of Environmental Quality and the City of
Russellville Council.

c. The Control Authority may develop Best Management Practices (BMPs), by Ordinance or in individual wastewater discharge permits or general permits, to implement Local Limits and the requirements of Section 2.1.

d. In addition, the Control Authority may develop specific discharge limitations, or Best Management Practice (BMPs), when deemed appropriate by the Control Authority, for any other toxic or inhibiting pollutant which may be determined to be of sufficient quantity to cause POTW interference, POTW Pass Through, endanger the health and safety of the POTW personnel or general public, produce environmental harm, cause a POTW permit violation or render the POTW's sludges unacceptable for economical reclamation, disposal, or use.

e. Section a. through d. are in addition to other restrictions on discharges which shall apply in any casewhere they are more stringent than Federal requirements and limitations or those in this Ordinance.

2.5 [Reserved]

2.6 The City's Right of Revision:[Reserved]

2.7 Dilution

No User shall ever increase the use of process water, or in any way attempt to dilute a discharge, as partial or complete substitute for adequate treatment to achieve compliance with a discharge limitation unless expressly authorized by an applicable Pretreatment Standard or Requirement. The Control Authority may impose mass limitations on Users which are using dilution to meet applicable pretreatment standards or requirements, or in other cases where the imposition of mass limitations is appropriate.

2.8 Slug Discharges:

A. Accidental Discharge/Slug Discharge Control Plans:

The Control Authority shall evaluate whether each SIU needs an accidental discharge/Slug discharge control plan or other action to control Slug Discharges. The Control Authority may require any User to develop, submit for approval, and implement such a plan or take such other action that may be necessary to control Slug Discharges. Alternatively, the Control Authority may develop such a plan for any User. An Accidental discharge/Slug discharge control plan shall address, at a minimum, the following:

1. Description of discharge practices, including nonroutine batch discharges;
2. Description of stored chemicals;
3. Procedures for immediately notifying the Control Authority of any accidental or Slug Discharges, as required by Section 6.7 of this ordinance; and
4. Procedures to prevent adverse impact from any accidental or Slug Discharge. Such procedures include, but are not limited to, inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site runoff, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants, including solvents, and/or measures and equipment for emergency response.

B. Notification Requirements:

Significant Industrial Users are required to notify the Superintendent immediately of any changes at its facility affecting the potential for a Slug Discharge.

2.9 Prohibition of Bypasses:

a. The Users pretreatment facility or device must be in operation at all times to the extent necessary to meet the applicable federal, state and local requirements and regulations and any intentional diversion, except as noted in Section 2.9.b below, of wastewater from any portion of the Users pretreatment facility or device is prohibited.

b. A bypass may be excused, however, if the bypass is necessary and there is no feasible alternative to prevent loss of life, personal injury or severe property damage. The no feasible alternative criterion is not satisfied if, in the exercise of reasonable engineering judgement, adequate back-up equipment

should have been installed to prevent a bypass which occurs during a period of maintenance or in a period of equipment downtime.

c. Knowledge of a pending bypass must be reported immediately to the Control Authority. If the bypass is unanticipated the User must give oral notice of the Bypass within 24 hours of becoming aware of the bypass.

d. For both anticipated and unanticipated bypasses, the user must submit to the Control Authority a written

report within 5 working days describing the following:

- (1) The nature of the Bypass;
- (2) the cause;
- (3) the duration and
- (4) solutions to avoid future bypasses.

2.10 Hauled Wastewater:

A. Septic tank waste originating from domestic sources may be introduced into the POTW only at locations designated by the Control Authority, and at such times as are established by the Control Authority. Such waste shall not violate Section 2 of this ordinance or any other requirements established by City Corporation. The Control Authority may require septic tank waste haulers to obtain individual wastewater discharge permits.

B. The Control Authority may require haulers of industrial waste to obtain individual wastewater discharge permits. The Control Authority may require generators of hauled industrial waste to obtain individual wastewater discharge permits. The Control Authority also may prohibit the disposal of hauled industrial waste. The discharge of hauled industrial waste is subject to all other requirements of this ordinance.

C. Industrial waste haulers may discharge loads only at location designated by the Control Authority. No load may be discharged without prior consent of the Control Authority. The Control Authority may collect samples of each hauled load to ensure compliance with applicable Standards. The Control Authority may require the industrial waste hauler to provide a waste analysis of any load prior to discharge.

D. Industrial waste haulers must provide a waste-tracking form for every load. This form shall include, at a minimum, the name and address of the industrial waste hauler, permit number, truck identification, names and addresses of sources of waste, and volume and characteristics of waste. The form shall

identify the type of industry, know or suspected waste constituents, and whether any wastes are RCRA hazardous wastes.

- E. Waste Haulers of waste materials removed from grease interceptors, solids traps or other such devices shall not, at any time, discharge any material retained by such devices back into the sanitary sewer collection system.

SECTION 3 - FEES AND SURCHARGES

3.1 Purpose

It is the purpose of this chapter to provide for the recovery of costs from Users of the POTW for the implementation of the program established herein. The applicable fees and surcharges are set forth in the City's Schedule of Charges and Fees.

3.2 Fees:

- a. The City may adopt charges and fees which may include:
 - (1) Fees for reimbursement of costs of setting up and operating the Control Authority's Pretreatment Program;
 - (2) Fees for monitoring, inspections and surveillance procedures;
 - (3) Fees for reviewing Accidental Discharge procedures and construction;
 - (4) Fees for permit applications;
 - (5) Fees for filing appeals;
 - (6) Fees for consistent removal by the Control Authority of pollutants otherwise subject to Federal Pretreatment Standards; or
 - (7) Other fees as the City may deem necessary to carry out the requirements contained herein.

b. These fees related solely to the matters covered by this Ordinance and are separate from all other fees chargeable by the City.

3.3 Surcharges:

- a. The discharge of pollutants in concentrations above that found in normal domestic wastewater may be accepted by the POTW from Users provided that:

- (1) The concentration levels of the constituent are

not above that established by the Control Authority for the acceptance of such wastewater.

(2) The wastewater has none of the characteristics described in Section 2.1 of the Ordinance;

(3) The User pays to the Control Authority a Surcharge for the acceptance of such wastes in addition to its normal fee.

b. The permissible concentration ranges for the constituents eligible for acceptance, and a schedule of the surcharge costs together with certain restriction and limitations will be established by the Control Authority and incorporated into the Wastewater Contribution Permit of the Industrial User.

SECTION 4 - ADMINISTRATION

4.1 Wastewater Discharge:

a. It shall be unlawful for a Significant Industrial User to discharge wastewater to the POTW without a current Wastewater Contribution Permit issued by The Control Authority in accordance with the provisions of this Ordinance.

b. All Users, currently not permitted by The Control Authority, who may discharge anything other than normal domestic sanitary wastewater must, if they have not previously done so, provide sufficient information or make an application for a Wastewater Contribution Permit so that the Control Authority can determine whether the applicant is a Significant Industrial User who must obtain a permit.

4.2 Wastewater Contribution Permits:

4.2.1 Individual Wastewater Discharge Permit Requirement.

a. All Significant Industrial Users proposing to connect to or to contribute to the POTW shall obtain a Wastewater Contribution Permit before connecting to or contributing to the POTW.

4.2.2 Permit Application

a. All Users required to apply for or obtain a Wastewater Contribution Permit shall complete and file with the Control Authority an application in the form prescribed by the Control Authority and accompanied by a fee outlined in The City's schedule of charges and fees. Existing users shall apply for permit reissuance no later than 180 days prior to the expiration of the User's existing permit. Proposed new Significant Industrial Users shall apply at least 90 days prior to connecting to or contributing to the POTW. At the discretion of the Control Authority, applications received within 90 days of the desired date of connection to or contribution to the POTW will be processed as expeditiously as possible. In support of the application, Users shall submit, in units and terms appropriate for evaluation, the following information, unless deemed inapplicable by the Control Authority.

- (1) Name, address, and location, (if different from the address);
- (2) SIC number according to the Standard Industrial Classification manual, Bureau of the Budget, 1972, as amended;
- (3) Wastewater constituents and characteristic including but not limited to those mentioned in Section 2 of this Ordinance as determined by a reliable analytical laboratory; sampling and analysis shall be performed in accordance with procedures established by the EPA pursuant to Section 304(h) of the Act and contained in 40 CFR, part 136, as amended;
- (4) Time and duration of contribution;
- (5) Average flow rates, including daily, monthly and seasonal variations if any;
- (6) Site plumbing plans and details to show all sewers, sewer connections, and appurtenances by the size, location and elevation;
- (7) Description of activities, facilities and plant

processes on the premises including all materials which are or could be discharges;

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8. Environmental Permits. A list of any environmental control permits held by or for the facility.

9. Measurement of Pollutants.

- a. The categorical Pretreatment Standards applicable to each regulated process and any new categorically regulated processes for Existing Sources.
- b. The results of sampling and analysis identifying the nature and concentration, and/or mass, where required by the Standard or by the Control Authority, of regulated pollutants in the discharge from each regulated process.
- c. Instantaneous, Daily Maximum, and long-term average concentrations, or mass, where required, shall be reported.
- d. The sample shall be representative of daily operations and shall be analyzed in accordance with procedures set out in Section 4.6 of this Ordinance. Where the Standard requires compliance with a BMP or pollution prevention alternative, the User shall submit documentation as required by the Control Authority or the applicable Standards to determine compliance with the Standard.
- e. Sampling must be performed in accordance with procedures set out in Section 4.6 of this ordinance.

b. The permit application may also contain any other information as may be necessary by the Control Authority to evaluate the permit application, including but not limited to the following:

- (1) Each product produced by type, amount, process or processes and rate of production;
- (2) Type and amount of raw materials processed (average and maximum per day); and

(3) Number and type of employees; and hours of operation of plant and proposed or actual hours of operation of the users pretreatment facility.

c. The Control Authority will evaluate the data furnished by the User and may require additional information. After evaluation and acceptance of the data furnished, the Control Authority may issue a Wastewater Contribution Permit subject to terms and conditions provided herein.

D. Application Signatories and Certification: All Wastewater Contribution Permit applications and Users reports must be signed by an authorized representative (defined in Section 1.2 a(3)) of the User and contain the following certification statement:

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

If the designation of an Authorized Representative is no longer accurate because a different individual or position has responsibility for the overall operation of the facility or overall responsibility for environmental matters for the company, a new written authorization satisfying the requirements of this Section must be submitted to the Control Authority prior to or together with any reports to be signed by an Authorized Representative.

4.2.3 Permit Modification

The Superintendent may modify an individual wastewater discharge permit for good cause, including, but not limited to, the following reasons:

- (1) To incorporate any new or revised Federal, State, or local Pretreatment Standards of Requirements.
- (2) To Address significant alterations to the User's operation, process, or wastewater volume or character since the time of the individual wastewater discharge permit issuance;
- (3) A change in the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;
- (4) Information indicating that the permitted discharge poses a threat to the City's POTW, City personnel, or the receiving waters;
- (5) Violation of any terms of conditions of the individual wastewater discharge permit;
- (6) Misrepresentations or failure to fully disclose all relevant facts in the wastewater discharge permit application or in any required reporting; or
- (7) To correct typographical or other errors in the individual wastewater discharge permit.

The terms and conditions of the permit may be subject to modification by the Control Authority during the term of the permit if the limitations or requirements as identified in Section 2 of this Ordinance are modified or for other just cause. The User shall be informed of any proposed changes in his permit at least 30 days prior to the effective date of change. Any changes or new conditions in the permit shall include a reasonable time schedule for compliance.

4.2.4 Permit Conditions:

a. Wastewater Contribution Permits shall be expressly subject to all provisions of this Ordinance and all other applicable regulations, Significant Industrial user charges and fees established by the City. Permits shall contain the following:

- (1) Statement of permit duration;

(2) Statement of non-transferability without, at a minimum, prior notification to the Control Authority;

(3) Applicable effluent limits, including Best Management Practices or Categorical Pretreatment Standards, if applicable;

(4) Applicable self-monitoring, sampling, reporting, and record keeping requirement, including sampling location, sampling frequency, sample type, and standards for tests and reporting schedule.

(5) Notification requirements for Slug Discharges and Bypasses as contained in Sections 2.8. and 2.9. of this Ordinance.

(6) Statement of applicable civil and criminal penalties for violation of the pretreatment standards and requirements, and applicable compliance schedule(s).

b. Permits may contain one or more of the following:

(1) The unit charge or schedule of the Significant Industrial Users charges and fees for the wastewater to be discharged;

(2) Limits on the average and maximum wastewater constituents and characteristics;

(3) Limits on average and maximum rate and time of discharge or requirements for flow regulations and equalization;

(4) Requirements for installation and maintenance of inspection and sampling facilities;

(5) Requirements for submission of technical reports or discharge reports.

(6) Requirements for maintaining and retaining plant records relating to wastewater discharge as specified by the Control Authority, and affording the Control Authority access thereto;

(7) Requirements for notification of the Control

Authority of any discharge, including a slug discharge, that could cause problems to the POTW; of any violation within 24 hours of becoming aware of the violation; and of any new introduction of wastewater constituents or any substantial change in the volume or character of pollutants in their discharge, including the listed or characteristic hazardous wastes for which the Significant Industrial User has submitted initial notification under 40 CFR 403.12(p);

(8) Compliance schedules; or

(9) Other conditions as deemed appropriate by The Control Authority to insure compliance with this Ordinance.

4.2.5 Permits Duration:

Wastewater Contribution Permits shall be issued for a specified time period, not to exceed five (5) years. A permit may be issued for a period less than a year or may be stated to expire on a specific date.

4.2.6 Permit Transfer:

Wastewater Contribution Permits are issued to a specific User for a specific operation. A wastewater discharge permit shall not be reassigned or transferred to a new owner, new User, without, as a minimum, providing the Control Authority:

- 1) 30 days advance notice of an intent to transfer or assign;
- 2) a certified statement by the assignee or transferee that upon the permits assignment or transfer, there will be not change in the operation of the facility so as to, in any way, affect the quantity and quality of the wastewater discharged to the POTW and
- 3) a copy of the existing individual control mechanism is provided to the transferee or assignee. All other transfers, assignments, change in premises or change in operations will require the prior approval of the Control Authority before the Wastewater Contribution Permit will become effective. Any succeeding owner or Significant Industrial User shall also comply with the terms and conditions of the existing permit.

Failure to provide advance notice of a transfer renders the individual wastewater discharge permit void of the date of facility transfer.

4.2.7 Regulation of Waste Received from Other Jurisdictions

A. All discharges to the City of Russellville POTW, which are outside the jurisdiction and are not part of another incorporated city, shall be required to agree by written contract to abide by the conditions set forth in this Ordinance, subsequent revisions and amendments to this Ordinance, and any rules and/or regulations promulgated by the City.

B. All incorporated cities which discharge to the City of Russellville POTW shall agree by written contract to adopt an Ordinance which meets the requirements of 40 CFR 403, General Pretreatment Regulations, and will be at least as stringent as the conditions set forth in this Ordinance. This agreement must also contain a provision that allows for the adoption of any and all rules and/or regulations promulgated by the Control Authority and shall delegate to the City of Russellville the powers to enforce the provisions of all laws, rules, and/or regulations adopted in accordance with this Section.

4.3 Reporting Requirements for Permittee

Reports (Baseline Monitoring, Compliance Date and Periodic Compliance) in this section shall include the certification statement as set forth in Section 4.2.2.d in this ordinance and shall be signed by an authorized Representative of the User as set forth in Section 1.2.3 in this ordinance.

4.3.1 Baseline Monitoring Reports

Within 180 days after the effective date of a Categorical Pretreatment Standard, or 180 days after a final administrative decision made upon the application of an appropriate Categorical Pretreatment Standard, whichever is later, an existing user subject to such categorical Pretreatment Standards and currently discharging to or scheduled to discharge to the POTW shall be required to submit to the Control Authority a Baseline Monitoring Report. This Baseline Monitoring Report shall contain all of the information required in 40 CFR 403.12(b)(1)-7. At least 90 days prior to the commencement of discharge, New Sources, and sources that become Users subsequent to the promulgation of an applicable Categorical Standard, shall submit to the Control Authority a Baseline Monitoring Report which contains all the information listed in

paragraphs 40 CFR 403.12(b)(1)-(5). New Sources shall also be required to include in their Report information on their method of pretreatment intended to be used in meeting their applicable pretreatment standards. Requirements for compliance schedules for meeting categorical Pretreatment Standards are set forth in 40 CFR 403.12 (c).

4.3.2 Compliance Date Report

Within 90 days following the date for final compliance with applicable pretreatment standards or, in the case of a New Source, following commencement of the introduction of wastewater into the POTW, any User subject to pretreatment standards and requirements shall submit to the Control Authority a report indicating the nature and concentration of all pollutants in its discharge which are limited by pretreatment standards and requirements and their average and maximum daily flow. The report shall state whether the applicable pretreatment standards or requirements are being met on a consistent basis and, if not, what additional O&M and/or pretreatment is necessary to bring the Significant Industrial User into compliance with the applicable pretreatment standards or requirements. This statement shall be signed by an authorized representative of the User. Any data presented as part of the report shall be prepared and certified by a certified laboratory and should any pretreatment be proposed or required, a registered engineer shall prepare and certify his/her involvement in the proposed pretreatment facility.

4.3.3 Periodic Compliance Reports

a. Any User subject to a pretreatment standards, after the compliance date of such pretreatment standards, or, in the case of a New Source, after commencement of the discharge into the POTW, and any noncategorical Significant Industrial User shall submit to the Control Authority during the months of June and December, unless required more frequently by the Control Authority, a report indicating the nature, concentration and flow of pollutants in the effluent which are limited by such pretreatment standards. (the Control Authority will specify reporting parameters for noncategorical SIUs) At the discretion of the Control Authority and in consideration of such factors as local high or low flow rates, holidays, budget

cycles, etc., the Control Authority may agree to alter the months for report submittal.

b. The Control Authority may impose equivalent mass limitations of Significant Industrial Users where the imposition of mass limitations is appropriate. In such cases, the report required by 4.3.3.a of this paragraph shall indicate the mass of pollutants regulated by pretreatment standards in the effluent of the Significant Industrial user. These reports shall contain the results of sampling and analysis of the discharge, including the flow and the nature and concentration, or production and mass where requested by the Control Authority, of pollutants contained therein which are limited by the applicable pretreatment standards. The frequency of monitoring shall be the same as above.

4.3.4 Notification of Potential Problems

All categorical and non-categorical Industrial Users shall notify the POTW immediately of all discharges that could cause problems to the POTW, including any slug loading by the Industrial User.

4.4 Monitoring Factors

a. The Control Authority may require, to be provided and operated at the users own expense, monitoring facilities to allow inspection, sampling, and flow measurement of the building sewer and/or internal drainage systems. The monitoring facility should normally be situated on the Users premises, but The Control Authority may, when such a location would be impractical or cause undue hardship on the User, allow the facility to be constructed in the public street or sidewalk area and located so that it will not be obstructed by landscaping or parked vehicles.

b. There shall be ample room in or near such sampling manhole or facility to allow accurate sampling and preparation of samples for analysis. The facility, sampling, and measuring equipment shall be maintained at all times in a safe and proper operating condition at the expense of the User.

c. Whether constructed on public or private property, the sampling and monitoring facilities shall be provided in accordance with the Control Authority's requirements and all applicable local construction standards and specifications. Construction shall be completed within 90 days following written notification by the Control Authority.

d. If a User subject to the reporting requirement in this section 4.3 monitors any regulated pollutant at the appropriate sampling location more frequently than required by the Control Authority, using the procedures prescribed in Section 4.6 of this ordinance, the results of this monitoring shall be included in the report.

4.5 Inspection and Sampling:

The Control Authority shall inspect the facilities of any user to ascertain whether the purpose of this Ordinance is being met and all requirements are being complied with. Persons or occupants of premises where wastewater is created or discharged shall allow the Control Authority, and other approval authorities, or their representatives, ready access at all reasonable times to all parts of the premises for the observation of any User personnel in the performance of any of their duties. All records of the facility pertaining in any way to the provisions of this Ordinance may be photocopied by the Control Authority and the copies removed from the facility's premises. EPA, ADEQ or The City shall have the right to set up on the Users property such devices as are necessary to conduct sampling, inspection, compliance monitoring and/or metering operations. Where a user has security measures in force which would require proper identification and clearance before entry into their premises, the user shall make necessary arrangements with their security guards so that upon presentation of suitable identification, personnel from the City, the Control Authority, ADEQ or EPA will be permitted to enter, without delay, for the purposes of performing their specific responsibilities.

4.6 Sampling and Analytical Procedures:

All pollutant analyses, including sampling techniques, to be submitted as part of a wastewater discharge permit application or report shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto, unless otherwise specified in an applicable categorical Pretreatment Standard. If 40 CFR Part 136 does

not contain sampling or analytical techniques for the pollutant in question, or where the EPA determines that the Part 136 sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analyses shall be performed by using validated analytical methods or any other applicable sampling and analytical procedures, including procedures suggested by the Control Authority or other parties approved by EPA. All samples shall be collected at the secure sample point, sample/inspection manhole, or process sampling point as designated by the Control Authority.

All independent laboratories performing analyses for Industrial Users, including, but not limited to self monitoring reports, Periodic Reports on Continuing Compliance, Baseline Monitoring Reports and/or split sample verification, shall be certified by the Arkansas Department of Environmental Quality Laboratory Certification Program for the specific analysis being performed. The Control Authority reserves the right to reject any analysis performed by an independent laboratory that is not duly certified for a particular analysis.

Samples collected to satisfy reporting requirements must be based on data obtained through appropriate sampling and analysis performed during the period covered by the report, based on data that is representative of conditions occurring during the reporting period.

- A. Except as indicated in Section B and C below, the User must collect wastewater samples using 24-hour flow-proportional composite sampling techniques, unless time-proportional composite sampling or grab sampling is authorized by the Control Authority. Where time-proportional composite sampling or grab sampling is authorized by the Control Authority, the samples must be representative of the discharge. Using protocols (including appropriate preservation) specified in 40 CFR Part 136 and appropriate EPA guidance, multiple grab samples collected during a 24-hour period may be composited prior to the analysis as follows: for cyanide, total phenols, and sulfides the samples may be composited in the laboratory or in the field; for volatile organics and oil and grease, the samples may be composited in the laboratory. Composite samples for other parameters unaffected by the compositing procedures as documented in approved EPA methodologies may be authorized by the Control Authority, as appropriate. In addition, grab samples may be required to show compliance with Instantaneous Limits.
- B. Samples for oil and grease, temperature, pH, cyanide, total phenols, sulfides, and volatile organic compounds must be obtained using grab collection techniques.
- C. For sampling required in support of baseline monitoring and 90-day compliance reports required in Section 6.1 and 6.3 [40 CFR 403.12(b) and (d)], a minimum of four (4) grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide and volatile organic compounds for facilities for which historical sampling data do not exist; for facilities for which historical sampling data are available, the Control Authority may authorize a lower minimum. For the reports required by paragraphs Section 6.4 (40 CFR

403.12(e) and 403.12(h)), the Industrial User is required to collect the numbers of grab samples necessary to assess and assure compliance by with applicable Pretreatment Standards and Requirements.

D. Sampling and testing shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto. The sampling methods performed shall include at a minimum procedures for sample chain of custody, preservation techniques, and holding times.

F. If sampling performed by an Industrial User indicates a violation, the User shall notify the Control Authority within 24 hours of becoming aware of the violation. The User shall also repeat the sampling and analysis and submit the results of the repeat analysis to the Control Authority within 30 days after becoming aware of the violation. Where the Control Authority has performed the sampling and analysis in lieu of the Industrial User, the Control Authority must perform the repeat sampling and analysis unless it notifies the User of the violation and requires the User to perform the repeat analysis. Resampling is not required if:

- (1) The Control Authority performs sampling at the Industrial User at a frequency of at least once per month; or
- (2) The Control Authority performs sampling at the User between the time when the initial sampling was conducted and the time when the User or the Control Authority receives the results of this sampling.

4.7 Pretreatment:

A. Users shall provide any and all pretreatment as necessary to comply with this Ordinance, their Wastewater Contribution Permit, all applicable State and Federal requirements and if applicable, Federal Categorical Pretreatment Standards within the time limitations as specified by the Federal Categorical Pretreatment Standards within the time limitations as specified by the Federal Pretreatment Regulations. Any facility required to pretreat wastewater to a level acceptable to the Control Authority shall provide, operate, and maintain a pretreatment facility at the User's expense. Detailed plans showing the pretreatment facility and operating procedures shall

be submitted to the Control Authority for review, and shall be acceptable to the Control Authority before construction of the facility. The review of such plans and operating procedures will in no way relieve the User from the responsibility of modifying the facility as necessary to produce an effluent acceptable to the Control Authority under the provisions of this Ordinance. Any subsequent changes in the pretreatment facility or method of operation shall be reported to and be acceptable to the Control Authority prior to the Users initiation of the changes.

- B. Grease, oil, and sand interceptors shall be provided when, in the opinion of the Superintendent, they are necessary for the proper handling of wastewater containing excessive amount of grease and oil, or sand; except that such interceptors shall not be required for residential users. All interception units shall be of a type and capacity approved by the Superintendent, shall be so located to be easily accessible for cleaning and inspection. Such interceptors shall be inspected, cleaned and repaired by the User at their expense.

4.8 Significant Noncompliance (SNC):

The Control Authority shall publish annually, in a newspaper of general circulation that provides meaningful public notice within the jurisdictions served by the POTW, a list of the Users which, at any time during the previous twelve (12) months, were in Significant Noncompliance with applicable Pretreatment Standards and Requirements. The term Significant Noncompliance shall be applicable to all Significant Industrial Users (or any other Industrial User that violates paragraphs (C), (D) or (H) of this Section) and shall mean:

- A. Chronic violations of wastewater discharge limits, defined here as those in which sixty-six percent (66%) or more of all the measurements taken for the same pollutant parameter taken during a six- (6) month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including Instantaneous Limits as defined in Section 2;
- B. Technical Review Criteria (TRC) violations, defined here as those in which thirty-three percent (33%) or more of wastewater measurements taken for each pollutant parameter during a six- (6) month period equals or exceeds the product of the numeric Pretreatment Standard or Requirement including Instantaneous Limits, as defined by Section 2 multiplied by the applicable criteria (1.4 for BOD, TSS, fats, oils and grease, and 1.2 for all other pollutants except pH);

- C. Any other violation of a Pretreatment Standard or Requirement as defined by Section 2 (Daily Maximum, long-term average, Instantaneous Limit, or narrative standard) that the Control Authority determines has caused, alone or in combination with other discharges, Interference or Pass-Through, including endangering the health of POTW personnel or the general public;
- D. Any discharge of a pollutant that has caused imminent endangerment to the public or to the environment, or has resulted in the Control Authority exercise of its emergency authority to halt or prevent such a discharge;
- E. Failure to meet, within ninety (90) days of the scheduled date, a compliance schedule milestone contained in an individual wastewater discharge permit or enforcement order for starting construction, completing construction, or attaining final compliance;
- F. Failure to provide within forty-five (45) days after the due date, any required reports, including baseline monitoring reports, reports on compliance with categorical Pretreatment Standard deadlines, periodic self-monitoring reports, and reports on compliance with compliance schedules;
- G. Failure to accurately report noncompliance; or
- H. Any other violation(s), which may include a violation of Best Management Practices, which the Control Authority determines will adversely affect the operation or implementation of the local pretreatment program.

4.9 Confidential Information:

- a. Information and data on a user obtained from reports questionnaires, permit applications, permit and monitoring programs and from inspections, shall be available to the public or other governmental agency without restriction unless the User specifically requests, and is able to demonstrate to the satisfaction of the Control Authority, that the release of such information would divulge information, processes or methods of production entitled to protection as trade secrets of the User.
- b. When requested by the User furnishing a report, the portions of a report which might disclose trade secrets or secret processes shall not be made available for inspection by the public but shall be made available upon written request to governmental agencies for uses related to the National Pollutant Discharge Elimination System (NPDES) Program or the Pretreatment Program; Provided, however, that such portions of a report shall be available for use by the

State or any state agency in judicial review or enforcement proceedings involving the User furnishing the report. Wastewater constituents and characteristics will not be recognized as confidential information.

c. Information accepted by the Control Authority as confidential, shall not be transmitted to any governmental agency or the general public by The Control Authority until and unless a ten-day notification is given to the User.

4.10 Notification Requirements

A. In accordance with 40 CFR 403.12(j) all Industrial Users shall promptly notify the Control Authority in advance of any substantial change in the volume or character of pollutants in their Discharge, including the listed or characteristic hazardous wastes for which the Industrial User has submitted initial notification under paragraph (b) of this section.

B. In accordance with 40 CFR 403.12 (p) the Industrial User shall notify the POTW, the EPA Regional Waste Management Division Director, and State hazardous waste authorities in writing of any discharge into the POTW of a substance, which if otherwise disposed of, would be a hazardous waste under 40 CFR part 261.

4.11 Recordkeeping

Users subject to the reporting requirements of this ordinance shall retain, and make available for inspection and copying, all records of information obtained pursuant to any monitoring activities required by this ordinance, any additional records of information obtained pursuant to monitoring activities undertaken by the User independent of such requirements, and documentation associated with Best Management Practices established under Section 2.4 c. Records shall include the date, exact place, method, and time of sampling, and the name of the person(s) taking the samples; the dates analyses were performed; who performed the analyses; the analytical techniques or methods used; and the results of such

analyses. These records shall remain available for a period of at least three (3) years. This period shall be automatically extended for the duration of any litigation concerning the User or the City, or where the User has been specifically notified of a longer retention period by the Superintendent.

SECTION 5 - ENFORCEMENT

5.1. Notification of Violation:

Whenever the Control Authority finds that any User has violated or is violating this Ordinance, Wastewater Contribution Permit, or any prohibition, limitation or requirements contained therein, the Control Authority may serve upon such person a written notice stating the nature of the violation. Within 30 days of the date of the notice, a plan for the satisfactory correction and prevention, to include specific required actions, shall be submitted to the Control Authority by the User. Submission of this plan in no way relieves the User of liability for any violation occurring before or after receipt of Notice of Violation.

5.2 Consent Agreement:

The Control Authority is hereby empowered to enter into Consent Agreement, assuring voluntary compliance, or other similar documents as an agreement with the user responsible for the noncompliance. Such agreements will include specific action to be taken by the User to correct the noncompliance within a time period also specified by the agreement.

5.3 Show Cause Hearing:

a. The Control Authority may order any User who causes or allows an unauthorized discharge to enter the POTW or who violates any of the conditions of this Ordinance, the permit, or applicable state or Federal laws or regulations to show cause before the Control Authority why the proposed enforcement action should not be taken. Notice shall be served on the User specifying the time and place of the show cause hearing, the reasons why the action is being taken,

the proposed enforcement action, and a request that the User show cause why this proposed enforcement action should not be taken. The notice of hearing shall be served personally or by registered or certified mail (return receipt requested) at least ten (10) days before the hearing. Service may be made on any agent or officer of a corporation. If a duly notified User fails to appear as noticed, immediate enforcement action may be pursued.

b. The Control Authority may itself conduct the show cause hearing and take the evidence, or may designate any of its board members or any officer or employee of The Control Authority to:

- (1) Issue in the name of the Control Authority notices of hearings requiring the attendance and testimony of witnesses and the production of evidence relevant to any matter involved in such hearings;

- (2) Take the evidence; and

- (3) Transmit a report of the evidence and hearing, including transcripts and other evidence, together with recommendations to the Superintendent or the Control Authority for action thereon.

c. At any hearing held pursuant to this Ordinance, testimony taken must be under oath and recorded stenographically. The transcript, so recorded, will be made available to any member of the public or any party to the hearing upon payment of the usual charges thereof (i.e. postage, printing expense, etc.)

d. Following the show cause hearing, the Control Authority shall within 15 days following the recommendation of the hearing officer issue and have served on all parties the action recommended. If warranted, the Control Authority shall recommend to the City Council, after setting forth the findings of fact, that the City Attorney pursue legal action; including civil action to recover the recommended penalties for the violation, injunctive relief and/or criminal prosecution. Alternatively, the Control Authority may issue to the User in violation, notice

that following a specified period of time, the sewer service will be discontinued unless its pretreatment facility shall have installed adequate devices or other related appurtenances and such devices or other related appurtenances are properly operated. Other orders and directives as are necessary and appropriate may be issued.

e. An order directing the cessation of sewer service shall not preclude a recommendation for legal action to the City.

5.4 Administrative Orders and Fines:

5.4.1 Compliance Orders:

When the Control Authority finds that a user has violated or continues to violate this Ordinance, its Wastewater Contribution Permit or orders issued thereunder, the Control Authority may issue an order to the User responsible for the violation that states that following a specified time period, sewer service shall be discontinued unless Users pretreatment facility has installed devices or other appurtenances and are properly operated. Compliance orders may also contain such other requirements as might be reasonably necessary and appropriate to address the noncompliance, including, but not limited to, the installation of pretreatment technology, additional selfmonitoring and management practices.

5.4.2 Cease and Desist Orders:

When the Control Authority finds that a User has violated or continues to violate this Ordinance, its Wastewater Contribution Permit or order issued thereunder, the Control Authority may issue an order to cease and desist all such violations and direct the User in noncompliance to comply forthwith, if necessary the Control Authority may take such appropriate preventive or remedial action as may be needed to properly address a continuing or threatened

violation, including halting operations and terminating discharge.

5.4.3 Administrative Fines:

When the Superintendent finds that a User has violated, or continues to violate, any provision of this ordinance, an individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, the Superintendent may fine such User in an amount not to exceed \$1000. Such fines shall be assessed on a per-violation, per-day basis. In the case of monthly or other long-term average discharge limits, fines shall be assessed for each day during the period of violation.

5.5 Emergency Authority:

a. The Control Authority, following only oral notice to the User, may suspend the wastewater treatment service or the Wastewater Contribution Permit of any person when, in the opinion of the Supervisor of the Control Authority, such suspension is necessary to immediately and effectively halt or prevent any actual or threatened discharge which presents, or may present, an imminent or substantial endangerment to the health, safety or welfare of persons.

b. The Control Authority, following a notice with the opportunity to respond, may halt or prevent any discharge to the POTW which presents or may present an endangerment to the environment or which threatens to interfere with the operation of the POTW.

c. Any User notified of a suspension of its wastewater treatment service and/or its Wastewater Contribution Permit shall immediately stop or eliminate the harmful discharge. In the event of a failure of the User to comply voluntarily with the demand for cessation, The Control Authority shall take such steps as deemed necessary, including immediate severance of the sewer connection, to prevent the endangering discharge. The Control Authority may reinstate the Wastewater Contribution Permit and/or the wastewater treatment service upon proof of the elimination of the endangering discharge, together with an acceptable detailed written statement submitted by the User

describing the cause of the harmful discharge and the measures taken to prevent any future occurrence. The proof and required statements must be submitted to The Control Authority within 15 days of the date of endangering discharges occurrence.

5.6 Revocation of Permits:

a. Any Significant Industrial User who violates any of the following conditions or requirements of this Ordinance, or applicable state and federal laws or regulations or any provisions of its Wastewater Contribution Permit is subject to having his permit revoked:

(1) Violation of Wastewater Contribution Permit conditions.

(2) Failure to accurately report the wastewater constituents and characteristics of its discharge.

(3) Failure to report significant changes in operations or wastewater constituents and characteristics.

(4) Refusal of reasonable access to the Significant Industrial Users premises for the purpose of inspection, monitoring or sampling.

b. A noncompliant Significant Industrial User will be notified of the proposed termination of its Wastewater Contribution Permit and offered an opportunity to show cause pursuant to Section 5.3 of this Ordinance why the proposed action should not be taken.

5.7 Judicial Remedies:

If any User discharges sewage, industrial wastes or other wastes into the POTW contrary to the provisions of this Ordinance, any other applicable ordinances, federal or state Pretreatment Requirements, or any order of the City or the Control Authority, or otherwise violates provisions of this Ordinance, the Wastewater Contribution Permit, or applicable laws and regulations, the Control Authority may recommend to the City Council that the City Attorney commence action for appropriate legal and/or equitable relief in a court of competent jurisdiction.

5.7.1 Injunctive Relief:

Whenever a User has violated or continues to violate the provisions of this Ordinance or its Wastewater Contribution Permit or orders issued thereunder, the Control Authority may request that the City Attorney immediately petition the Court for the issuance of a preliminary or permanent injunction, or both, as may be appropriate to restrain or compel the activities of the User.

5.7.2 Civil Penalties:

a. Any User who is found to have violated or continues to violate an order of the City and/or the Control Authority or who negligently failed to comply with any provisions of this Ordinance or the orders, rules, regulations and permits issued thereunder, may be fined not more than One Thousand Dollars (\$1,000.00) for each offense. Jurisdiction to determine such penalties shall be in the City Municipal Court or other court of appropriate jurisdiction. Each day on which a violation shall occur or continue shall be a separate and distinct offense.

b. In addition to the civil penalties provided for herein, the City may recover, from the user in violation, any damages suffered, reasonable attorneys fees, court costs, court reporters fees and other expenses of litigation in any action in law or equity against any person or other entity.

c. The City Attorney shall petition the Court to impose, assess and recover all civil penalties, legal fees, and costs together with damages if appropriate. In determining the amount of the penalty, the Control Authority in its recommendation for civil penalties, the City Council and the Court shall take into account all relevant circumstances, including, but not limited to, the extent of harm caused by the violation, the magnitude and duration of the violation, any economic benefit gained by the user in allowing the violation, the timing and nature of any corrective actions taken

by the User, the compliance history of the User and any other factors as justice requires.

5.8 Criminal Prosecution:

a. The Control Authority may recommend to the City Council that the City Attorney criminally prosecute any User who knowingly or willfully violates any provision of this ordinance, its Wastewater Contribution Permit or any orders issued thereunder. If so prosecuted the User shall, upon conviction, be guilty of a misdemeanor, and punished by a fine not to exceed \$1,000.00 per violation per day or imprisonment for not more than six (6) months, or both.

b. Any person who knowingly or willfully makes any false statement, representation or certification in any application, record, report, plan or other document filed or required to be maintained pursuant to this Ordinance or its Wastewater Contribution Permit, or who falsifies, tampers with, or knowingly or willingly renders inaccurate any monitoring or sampling device, wastewater sample or other methods required under this Ordinance, shall be guilty of a misdemeanor, and shall, upon conviction, be punished by a fine of not more than \$1,000.00 or by imprisonment for not more than six (6) months or both.

5.9 Supplemental Enforcement Remedies:

5.9.1 Annual Publication of Users in Significant Noncompliance:

The Control Authority shall publish, at least annually in the largest daily newspaper circulated in the area, a description of those Users which are found to be in Significant Noncompliance as defined in section 4.8) with any provisions of this Ordinance or any permit or order issued thereunder during the period since the previous publication.

5.9.2 Performance Bonds:

The Control Authority may decline to reissue a Wastewater

Contribution Permit to any Significant Industrial user which has failed to comply with the provisions of this Ordinance or any order or previous permit issued thereunder unless such Significant Industrial User files with the Control Authority a satisfactory bond payable to the City in a sum not to exceed an amount determined by the Control Authority to be necessary to achieve consistent compliance.

5.9.3 Remedies Nonexclusive

The remedies provided for in this ordinance are not exclusive. The Control Authority may take any, all, or any combination of these actions against a noncompliant User. Enforcement of the pretreatment violations will generally be in accordance with the City's enforcement response plan. However, the Control Authority may take other action against any User when the circumstances warrant. Further, the Control Authority is empowered to take more than one enforcement action against any noncompliant User.

SECTION 6 - SEVERABILITY

If any provision, paragraph, word, section, chapter, or article of this Ordinance is invalidated by any court of competent jurisdiction, the remaining provisions, paragraphs, words, sections, chapters, and articles shall not be affected and shall continue in full force and effect.

SECTION 7 - AMENDED

As of the effective date of this Ordinance, all other Ordinances or parts of Ordinances in conflict with this Ordinance are amended.

SECTION 8 - EFFECTIVE DATE

This Ordinance being necessary for the health, safety and welfare of the citizens of Russellville, an emergency is declared to exist, and this Ordinance shall take effect and be enforced from and after its passage, approval and publication, as provided by law.

PASSED AND APPROVED this .

CITY OF RUSSELLVILLE ORDINANCE
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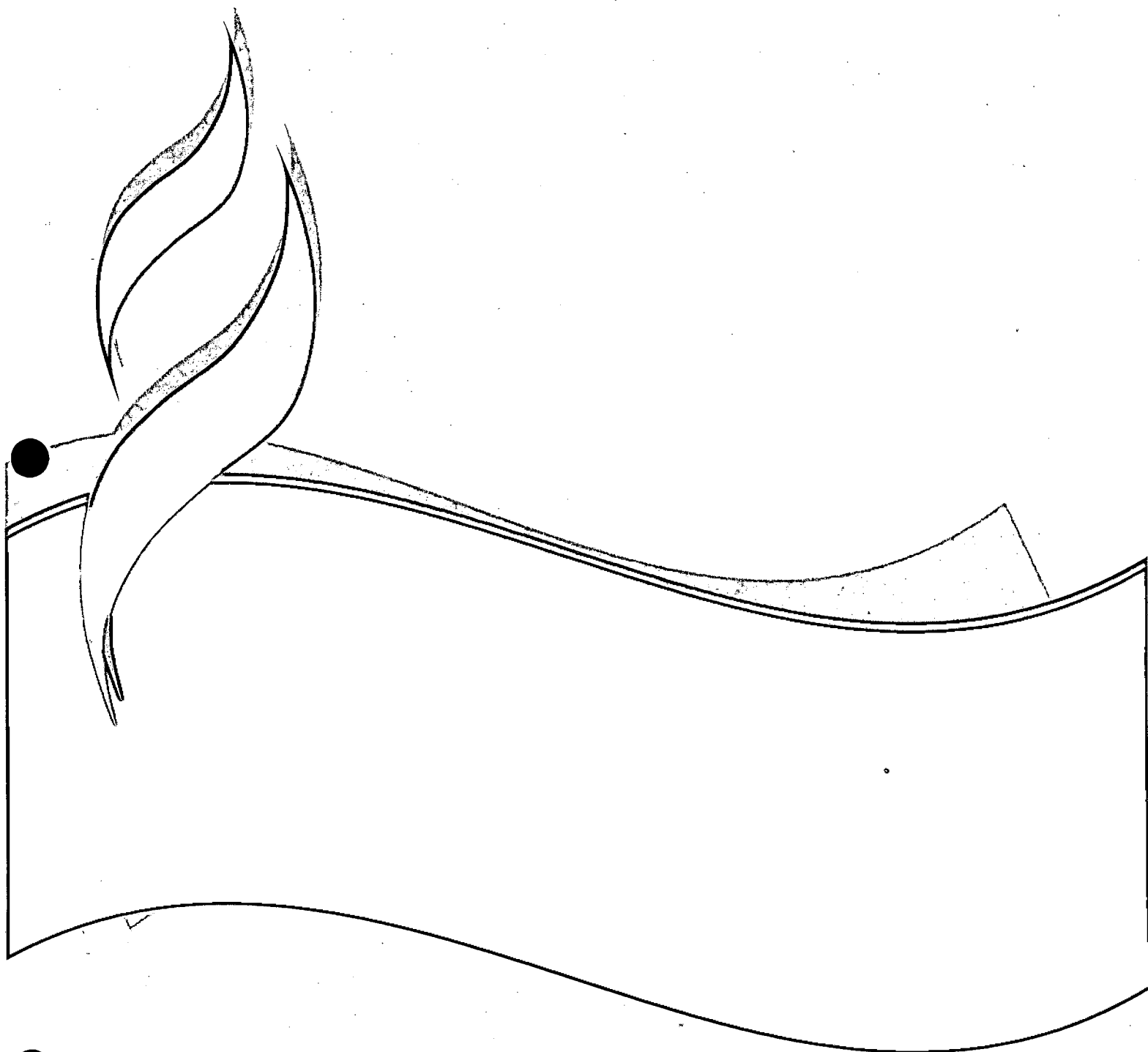
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APPENDIX E

SANITARY SEWER OVERFLOW LIST



APPENDIX E- OVERFLOW LIST

Manhole	Address	Project Name	Basin	Design Year	Total # of	
					Occurrences (Since 2006)	Date of Last Overflow
1043	400 N Vancouver	Basins 7,14 & 23	RV14	2012	1	10/28/2011
1200	1105 Resimont	Basins 9,15 & 25	RV15	2015	1	4/22/2012
1295	812 E Parkway	Basins 13,16 & 26	RV13	2016	1	1/25/2012
1315	3rd & Vancouver	Hydraulic Cap Improv	RV16	2013	2	5/2/2011
1333	4th & Waco	Hydraulic Cap Improv	RV16	2013	3	5/2/2011
1341	1310 Ridgewood Dr	Basins 13,16 & 26	RV16	2016	1	3/21/2012
1465	ATU	Basins 17,18 & 20	RV20	2014	1	5/2/2011
1466	Prairie Creek Lift Station	Basins 17,18 & 20	RV20	2014	1	6/24/2009
1468	ATU	Basins 17,18 & 20	RV20	2014	1	5/2/2011
1510	413 S. Commerce	Basins 7,14 & 23	RV23	2012	1	9/8/2007
1513	5th & Commerce	Basins 7,14 & 23	RV23	2012	1	1/25/2012
1564	Marina Rd.	Basins 1,2,8 & 11	RV02	2012	1	9/3/2008
1567	C and Boston	Hydraulic Cap Improv	RV24	2013	3	4/25/2011
1568	107 N Boston Pl	Hydraulic Cap Improv	RV24	2013	1	12/19/2011
1593	601 E 7th St	Basins 12,19 & 24	RV24	2017	1	12/5/2011
1624	115 E. Parkway	City Mall	RV24	2012	1	12/12/2006
1675	E. Main and Nashville	Basins 13,16 & 26	RV13	2016	1	11/21/2006
1704	E L st & Parker Rd	City Mall	RV25	2012	4	1/25/2012
1705	1025 Parker Rd	City Mall	RV25	2012	1	12/5/2011
1706	1022 Parker	City Mall	RV25	2012	2	12/5/2011
1711	1003 E J St	City Mall	RV25	2012	1	1/23/2012
1725	E G & Greenwich	City Mall	RV25	2012	3	12/5/2011
1728	904 N Frankfort Ave	City Mall	RV25	2012	1	1/21/2012
1735	1317 N. Frankfort	Basins 3,5,6 & 21	RV21	2013	1	3/16/2007
1823	City Mall	City Mall	RV24	2012	2	12/5/2011
1825	N. Arkansas Ave	City Mall	RV24	2012	4	5/20/2010
1848	1500 N. Jackson	Basins 9,15 & 25	RV25	2015	1	9/8/2007
1850	1506 Knoxville Ave	Basins 9,15 & 25	RV25	2015	1	8/8/2010
1996	906 W 16th St	Basins 3,5,6 & 21	RV05	2013	1	12/29/2011
2023	Cedar and N. Commerce	Basins 9,15 & 25	RV15	2015	3	5/15/2010
2024	108 W Birch St	ATU North-Garver	RV22	unk	7	3/21/2012
2028	Birch and Commerce	ATU North-Garver	RV22	unk	2	5/11/2009
2032	Birch and Commerce	Basins 22,27 & 28	RV22	2018	1	10/9/2009
2035	Honda of Rsvl, Lakefront Dr	ATU North-Garver	RV22	unk	1	5/15/2010
2036	220 Lakefront Dr	ATU North-Garver	RV22	unk	5	3/22/2012
2040	ATU	Basins 17,18 & 20	RV20	2014	1	12/5/2011
2043	ATU Softball Field	Basins 17,18 & 20	RV20	2014	6	3/8/2012
2046	West R & N Glenwood	Basins 17,18 & 20	RV20	2014	1	3/21/2012
2048	ATU Pasture	Basins 17,18 & 20	RV20	2014	7	3/21/2012
2050	ATU Pasture	Basins 17,18 & 20	RV20	2014	6	3/21/2012
2276	O & Glenwood	Basins 17,18 & 20	RV20	2014	1	5/20/2011
2314	ATU	Basins 17,18 & 20	RV20	2014	2	5/2/2011
2808	415 S Erie Ave	Basins 12,19 & 24	RV24	2017	1	1/4/2012
2815	Arkansas Tech	Basins 17,18 & 20	RV20	2014	1	1/3/2010
2816	Arkansas Tech	Basins 17,18 & 20	RV20	2014	1	1/3/2010
2817	N Glenwood	Basins 17,18 & 20	RV20	2014	2	1/3/2010
2859	321 W. B	Basins 7,14 & 23	RV23	2012	1	6/12/2006
3026	2502 W 2nd St.	Basins 17,18 & 20	RV17	2014	1	8/14/2011
3027	2502 W 2nd St.	Basins 17,18 & 20	RV17	2014	2	7/15/2010
3043	N Hunter Ridge Ln	Basins 17,18 & 20	RV18	2014	1	2/20/2010
3052	102 N Fairbanks	Basins 17,18 & 20	RV17	2014	2	6/11/2010
3075	3801 W Main	Basins 17,18 & 20	RV18	2014	2	7/19/2012
3094	215 S. Portland	Basins 17,18 & 20	RV18	2014	2	12/8/2010
3114	106 S. Hastings	Basins 17,18 & 20	RV18	2014	1	11/16/2006
3191	John Trusty Lane	Hydraulic Cap Improv	RV18	2013	1	12/5/2011
3193	John Trusty Lane	Hydraulic Cap Improv	RV18	2013	9	3/21/2012
4015	1900 E. Main	East 2nd Street	RV09	2011	1	8/19/2006
4019	1611 E. Main St.	Basins 9,15 & 25	RV09	2015	1	11/20/2006
4020	E Main & N Sydney	Basins 9,15 & 25	RV09	2015	1	1/14/2011
4023	2209 E. Main	Basins 9,15 & 25	RV09	2015	1	8/16/2006
4043	N. Glenwood	Basins 9,15 & 25	RV09	2015	1	10/9/2009
4107	200 S El Mira	East 2nd Street	RV11	2011	1	4/9/2010
4116	806 E. 4th St.	Basins 1,2,8 & 11	RV08	2012	1	11/15/2006

APPENDIX E- OVERFLOW LIST

Manhole	Address	Project Name	Basin	Design Year	Total # of Occurrences (Since 2006)	Date of Last Overflow
4127	515 S Ithaca	Basins 1,2,8 & 11	RV08	2012	5	3/8/2012
4138	807 S Ithaca	Basins 1,2,8 & 11	RV08	2012	1	12/29/2010
4182	1200 East E St.	Basins 9,15 & 25	RV09	2015	1	11/5/2012
4214	Flying J Truck Stop	Basins 1,2,8 & 11	RV11	2012	1	1/23/2010
5005	909 Sequoyah Way	Basins 3,5,6 & 21	RV05	2013	1	1/19/2012
5018	1203 S Commerce Ave	Basins 3,5,6 & 21	RV05	2013	1	11/9/2011
5032	E. 11th and Boston	Basins 3,5,6 & 21	RV03	2013	10	3/21/2012
5043	109 E 13th Street	Basins 3,5,6 & 21	RV03	2013	1	11/13/2012
5054	14th and Boston	Basins 3,5,6 & 21	RV06	2013	2	1/5/2010
5120	11th and Glenwood	Basins 3,5,6 & 21	RV05	2013	1	3/26/2007
5136	111 E. 8th St.	Basins 12,19 & 24	RV24	2017	1	9/21/2006
5164	Eat 11th St & Boston Ave	Basins 3,5,6 & 21	RV03	2013	1	12/5/2011
5668	710 E. 23rd	Basins 3,5,6 & 21	RV03	2013	1	3/19/2007
6085	1336 S Sidney Ave	Basins 7,14 & 23	RV07	2012	1	7/30/2012
6088	1312 S Sidney Ave	Basins 7,14 & 23	RV07	2012	1	3/19/2007
6231	3509 E. 4th St.	Basins 1,2,8 & 11	RV02	2012	1	9/21/2006
6415	300 Industrial	Basins 1,2,8 & 11	RV02	2012	1	8/16/2006
6478	404 Jimmy Lile Rd	Treatment Plant			3	12/5/2011
7017	106 Lakeshore Dr.	Basins 12,19 & 24	RV19	2017	1	1/4/2007
7053	Lift Station B	Basins 12,19 & 24	RV19	2017	1	12/14/2006
8046	Pollution Control Works	Basins 13,16 & 26	RV26	2016	1	5/2/2009
8048	Pollution Control Works	Treatment Plant			5	4/10/2008
9016	Shadow Valley PS	Basins 22,27 & 28	RV22	2018	1	2/9/2012
Old Post	Old Post Lift Station	Basins 13,16 & 26	RV26	2016	2	4/19/2011
PCW	Pollution Control Works	Treatment Plant			1	5/2/2011

APPENDIX F

NO EXPOSURE PERMIT RENEWAL



ADEQ

ARKANSAS
Department of Environmental Quality

June 4, 2010

Mr. Craig Noble
City Corporation
P.O.Box 3186
Russellville, AR 72811

RE: Notice for No Exposure Exclusion under the Industrial Stormwater General Permit, ARR000000
(Permit Tracking No. ARR000104 - AFIN 58-00105)

Dear Mr. Noble:

The renewal certification for "No Exposure Exclusion" under the Industrial Stormwater General Permit ARR000000 for City Corporation Wastewater Treatment Plant, located in Russellville, AR, has been approved by the Department based on the information the facility provided. The Renewal No Exposure Certification was received on 03/26/2010. For tracking purposes, the facility will remain under permit tracking number, ARR000104. Please continue to use this number in all future correspondence related to this facility.

Renewal Certification Date: 03/26/2010
Expiration Date: 06/30/2014

Please note that a facility site inspection may be conducted at a later date to verify the conditions of the "No Exposure Exclusion". If all of the conditions of "No Exposure" are not verified during the site inspection, the "No Exposure Exclusion" will be canceled and stormwater discharges shall be in accordance with the terms and conditions of the ARR000000.

On July 29, 2009, the Arkansas Environmental Federation ("AEF") filed a Third Party Request for Commission Review and Adjudicatory Hearing challenging the permit, Docket No. 09-011-P. As a result of that appeal, the 2009 IGP was automatically stayed and not in effect. On March 26, 2010, the Arkansas Pollution Control and Ecology Commission (Commission) granted a modification of the automatic stay in Minute Order No. 10-09. This modification lifted the automatic stay from the 2009 IGP until a final decision on the appeal is issued by the Commission. Under the terms of the Commission's Minute Order lifting the stay, the 2009 IGP immediately became effective, except for those sections that are the subject of the appeal by the Arkansas Environmental Federation. The written decision of the Commission included alternative terms and conditions that applied in the place of the sections that remained stayed. A copy of Commission's Minute Order, including the attachment that lists the sections that remain stayed and the alternative terms and conditions that apply to all dischargers during the pendency of the appeal, and the 2009 IGP can be obtained from the following website:

http://www.adeq.state.ar.us/water/branch_permits/general_permits/stormwater/industrial.htm.

Please note that one of the primary issues in the appeal is the authority of ADEQ to issue a general permit. Although ADEQ believes the law unequivocally gives the Director the authority to issue permits, if any facility is concerned about having legal authority to operate in the unlikely event that AEF should prevail in its appeal, facilities covered by the general permit have the option of obtaining an individual NPDES permit from ADEQ for industrial stormwater discharges.

If you have any questions concerning this matter or need additional information, please feel free to contact the General Permits Section at (501) 682-0623.

Sincerely,



Mo Shafii
Assistant Chief
Water Division

MS: ag

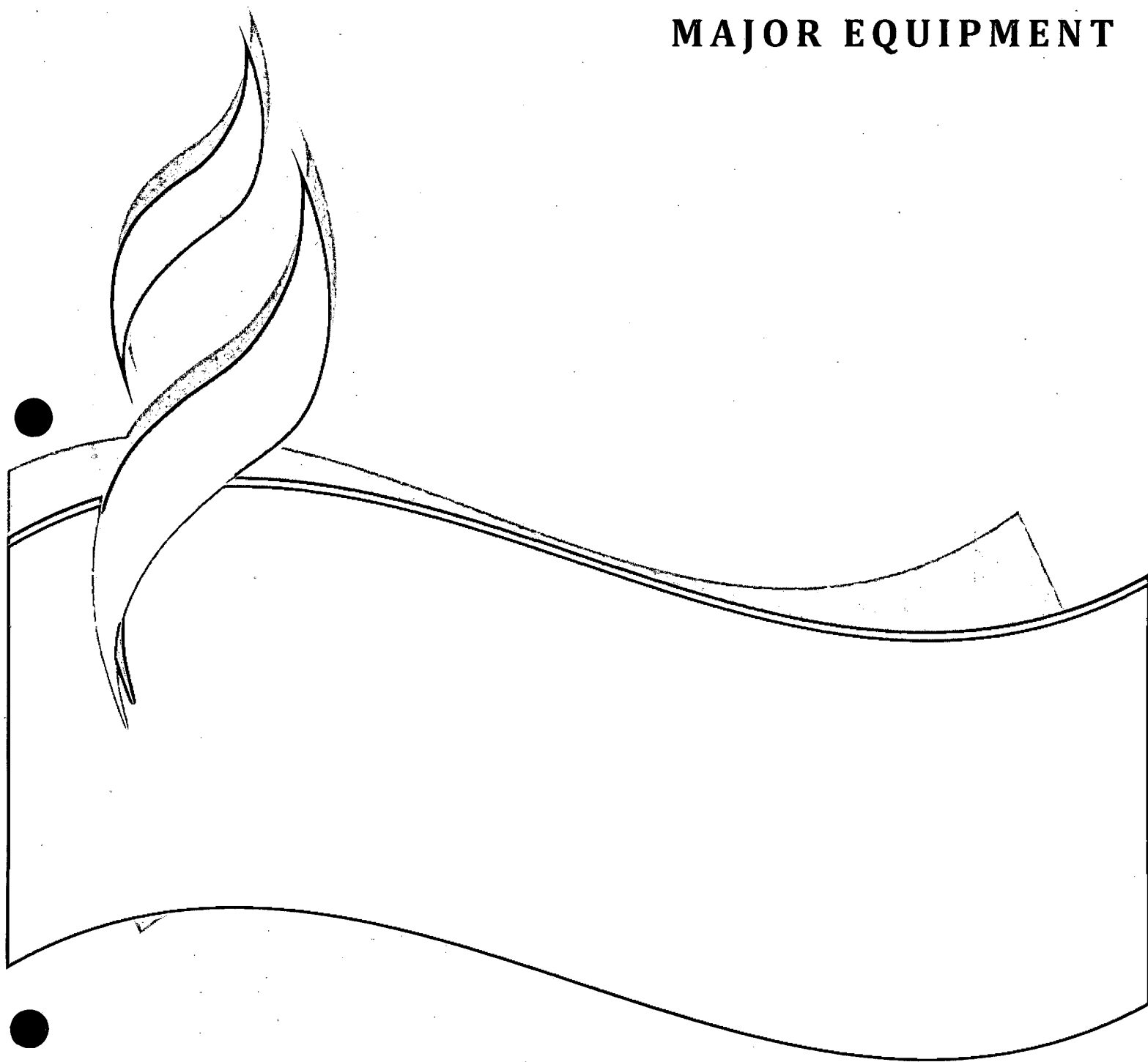
cc: Electronic Filing (ARR000104 w/ attachments)
Eric Fleming, Branch Manager, Field Services Branch
Cindy Garner, Branch Manager, Enforcement Branch
Jim Purvis, Administrative Analyst, Fiscal Division
David Ramsey, Administrative Analyst, Enforcement Branch

Industrial Stormwater Renewal Route Sheet

Facility Name: <u>City Corporation Wastewater Treatment Plant</u>			
Permit Number: <u>AR000104</u>		AFIN NO.: <u>58-00105</u>	
No Exposure Exclusion: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Monitoring Category: <input checked="" type="checkbox"/>	Industrial Sector: <u>IL</u>
Stream Segment: <u>3F</u>		Nearest Receiving Water: <u>wing Creek</u>	HUC: <u>11110203</u>
Assigned	Activity	Initials	Date Complete/Entered
Sect.	NOI Logged/Assign to Engineer (1-day)		N/A
Engineer (5 days)	Confirm/Perform the following: <input checked="" type="checkbox"/> Check Permittee Name on SOS (if applicable) <input checked="" type="checkbox"/> Check SIC Code <input type="checkbox"/> Assign Industrial Sector <input type="checkbox"/> Check Facility and Outfall Coordinates by Google Earth. <input checked="" type="checkbox"/> Check Receiving Stream <input type="checkbox"/> Enter information into Access <input checked="" type="checkbox"/> DMR status _____ submitted Dates not submitted:	<u>RY</u>	<u>5/7/10</u>
AA (5 days unless AFIN Change is Required)	Check the following into PDS: <input type="checkbox"/> AFIN Change Required <u>name change</u> <input type="checkbox"/> Invoice Information <input type="checkbox"/> Coordinates-if not already there <input type="checkbox"/> SIC/NAICS <input type="checkbox"/> Receiving Stream <input type="checkbox"/> Stream Segment <input type="checkbox"/> Facility Contact (All info-name/number/email) <input type="checkbox"/> Facility Mailing Information <input type="checkbox"/> Monitoring Category <input type="checkbox"/> Staff	<u>jet</u> <u>jet</u>	<u>5/18/10</u> <u>want 2 weeks</u> <u>5/18/10</u>
Engineer (2 days)	Merge Permit Authorization Letter	<u>jet</u>	<u>6/2/10</u>
Engineer Supervisor (1-day)	Review all the documents. Make recommendation.		
Assistant Chief (1-day)	Review the documents and sign the authorization letter or the permit.		
Sect.	<input checked="" type="checkbox"/> Scan complete packet <input checked="" type="checkbox"/> E-mail to everyone cc on the letter <input checked="" type="checkbox"/> Mail Letter	<u>HH</u>	<u>6/8/2010</u>

Comments:

APPENDIX G
MAINTENANCE VEHICLES AND
MAJOR EQUIPMENT



City Corporation Fleet Listing

Vehicle #	Description	Operation
502	2006 Chev. Silverado	2
503	1999 International 4700 Dump	4
504	1995 Ford F800 Dump	1
505	2007 Ford F150 (8cyl)	5
506	2008 Ford F350	1
507	1996 Ford 555D Backhoe	1
508	2003 New Holland LB75.B Backhoe	1
509	1997 Sullair 185DLG (542)	1
510	2006 International 420 Diesel Pickup	1
511	2009 Ford F150	1
514	2000 Dodge 1/2 Ton	4
515	2007 Ford F150 (6cyl)	7
517	2010 Ford Ranger	1
518	2000 Ford TC35D Tractor	4
519	2007 Ford F150	4
520	1998 Chevrolet 1/2 Ton 1500	3
521	2004 Chevrolet 1500	6
522	2005 Chev SC1 Pickup	6
523	2007 Ford F150	6
526	2009 Ford F150	6
527	2008 Ford F250	5
528	2002 Ford F350 4x4	1
529	1986 Ford 2110 4x4 Tractor	4
530	1995 New Holland Skid Loader	4
531	2009 Ford F250	1
532	2005 Chev SC1 Pickup	5
533	2005 GMC 2KH Pickup	5
538	1993 Case 1845C Unloader	2
539	2004 Sreco Jetter	1
540	2003 International 4200 Diesel	1
541	2004 International 4200 Diesel	1
542	2010 Freightliner M2106	1
543	1995 Ford F700 Flatbed	1
544	2008 Ford F350 Diesel	1
545	2004 New Holland LB75.B Backhoe	1
546	1997 International 2 Ton Flatbed Dump	1
555	1998 Ford 555E Backhoe	1
556	2005 case 580M Backhoe	1
558	2007 SECA Model 747FR2 Jetter/Cam Tr.	1
559	2007 Tex-Mex 14' Trailer	5
560	1996 Alumacraft MV 1650 AW Boat	2
601	1992 Hudson Trailer	1
602	1992 Hudson Trailer	1
603	2005 Holden Model HCZ Trailer	1

City Corporation Fleet Listing

Vehicle #	Description	Operation
604	2000 Tiger-Vac	1
605	2007 Kubota RTV	4
606	1994 Justin C Trailer 6x14	1
607	2005 Holden Model HCZ Trailer	1
608	1996 Gooseneck Trailer	5
609	1995 Sullair Compressor 540	1
610	1995 Sullair Compressor 541	1
611	1989 Wells Cargo Trailer	1
612	1986 Light Boat Trailer	2
613	2010 Trailmaster 14' Trailer	4
614	1996 M-F Tractor	2
616	1995 CRLY Utility Boat Trailer	2
617	2007 Kubo RTV	2
618	2001 Troy Built 50" Mower	2
619	1996 Sullair 185 543	1
620	1999 FR2000 Sreco Jetter	1
621	1999 Easement Cleaner	1
622	1999 Sreco Seca Trailer	1
623	1999 Big Tex Dump Trailer	1
624	1999 Kodiak Trailer	2
625	2004 Husqvarna Lawn Tractor	1
626	2005 Cherokee Enclosed Trailer	1
627	1991 Toro Proline 52" Mower	2
628	2003 MEBT U Trailer	5
629	2006 Bad Boy Mower	5
630	2006 John Deere X500 Mower	2
631	2003 125 Genearator RE02JB	4
632	2003 500 Generator	4
633	2009 125 Genearator GCT-2E-11400	4
634	2009 10' Big Bee Rotary Cutter	2
	Black 16' Trailer (Kept at Const. Shop	1
	Rover X Camera System	1

- 1 Construction Dept
- 2 Water Plant
- 3 Con-Agra PTP
- 4 Wastewater Plant
- 5 Maintenance
- 6 Office-Service
- 7 NOC

APPENDIX H

SPARE PARTS INVENTORY



City Corporation Spare Parts Inventory

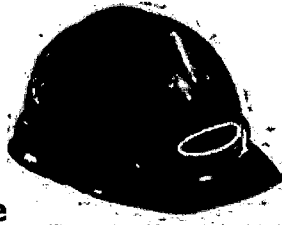
No.	Item2	Quantity
1	Radio for Scada PAC MDS 4710/S.N.1486560	1
2	Shaft Sleeve for Flygt Pump Part # 52-109-473-001	1
3	Rail Guides for Grinder Pump Station	1
4	Scad PAC S.N. 5015705.	1
5	Cramer Hour Meters Model # 6x137	1
6	Bushing Material for Air Lift Disc at the PCW Porgy 2.375x3.75	1
7	Complete Capacitor Package for 2hp single phase 230 v grinder pump	7
8	Capacitor # 97F9632 440 VOLTS 50/60HZ (Fits all sewer lift stations)	7
9	Capacitor # 12141A006 220 VAC. 50/60 HZ	2
10	Capacitor # 12141A000 250 VAC. 50/60 HZ	2
11	Capacitor #97F9633 440 VAC 50/60 HZ	1
12	Capacitor #97F9264 410 VAC 50/60 HZ	1
13	Relay # 3ARR22J15M3	3
14	O-Ring kit for Flygt Pump	2
15	Rebuild Kits for 2inch Air Relief Valves	4
16	Transducer Serial # 2007/PBD/1V3090029	1
17	Transducer Serial # PBD / W 5140518	1
18	Transducer Serial # PBD/ W 7080013	1
19	2 inch air release valves for sewer force mains	3
20	Myers 5 Horse Power 1750 RPM Pump. Spare for Rim Rock	1
21	Complete Rebuild Kit for a Residential Grinder Pump Station	1
22	Myers 2 Horse Power 230 Volt Grinder Pump	1
23	4715 Sewer Service Saddle Romac 4.63	10
24	4723 Furnco Plastic x Plastic 4"	105
25	4731 Furnco Clay x Plastic 4"	104
26	4758 Furnco Plastic x Plastic 6"	26
27	4766 Furnco Clay x Plastic 6"	78
28	4774 Furnco Plastic x Plastic 8"	37
29	4782 Furnco Clay x Platic 8"	56
30	4790 Furnco Plastic x Plastic 10"	24
31	4804 Furnco Clay x Plastic 10"	10
32	4812 Furnco Plastic x Plastic 12"	5
33	4820 Furnco Clay x Plastic 12"	5
34	4839 Pipe PVC SCH 40 4"	975
35	4847 Pipe PVC SDR 26 6"	417
36	4855 Pipe PVC SDR 26 8"	82
37	4863 Pipe PVC SDR 26 10"	69
38	4871 Pipe PVC SDR 26 12"	98
39	4898 Manhole Riser STD. DIA. 1.5"	12
40	4901 Manhole Riser STD. DIA. 2"	24
41	4928 Manhole Riser STD. DIA. 3"	0
42	4936 Manhole Riser STD. DIA. 4"	18
43	4944 Manhole Riser STD. DIA. 6"	14
44	4952 Manhole Riser STD. DIA. 8"	0

45	4960 Manhole Riser STD. DIA. 10"	0
46	4979 Manhole Riser STD. DIA. 12"	0
47	4987 Reg Manhole Top Ring	2
48	4995 Flat Top Manhole Ring	6
49	5002 Manhole Lid STD. DIA.	9
50	5010 Sondes Green Marker	117

APPENDIX I

WORKPLACE SAFETY COMMITTEE DOCUMENT





Workplace Safety Committee

Many people, including the Nonprofit Risk Management staff, believe that workplace safety must be everyone's concern and that the collective "everyone" needs a leader to consistently address and promote safe practices in the workplace. In most small to mid-size entities a single person serves this purpose. The role of "workplace safety coordinator" can be incorporated into someone's job description—it does not have to be a separate position. Various personnel must be able to perform specific steps to identify and control hazards. In larger organizations, a safety director, safety manager or safety officer, sometimes under the leadership of a professional risk manager, is in charge of the workplace safety program and appoints a workplace safety committee to assist in implementing the workplace safety program.

Membership

Membership in the workplace safety committee is determined by the nature of the entity's operations. Usually all supervisors (department heads or program managers) serve on the committee. Other employees and special advisors—an insurance professional, a firefighter, or a police officer—may be invited to attend.

Committee Chair

The committee is chaired by the workplace safety coordinator. The chair leads the committee, schedules monthly safety meetings, serves as the contact with outside agencies on safety matters, and retains all safety-related documents. The chair is able to function best with direct access to the chief elected official or administrator of the organization.

Committee Functions

- Create, carry out and watch over safety-specific programs.
- Hold monthly safety meetings.
- Hold monthly workplace safety inspections.
- Run quarterly loss analysis. (Review injury and illness records).
- Provide safety-related in-services.
- Make advisory recommendations to the entity's managers.

Specific Safety Programs

Those safety programs that are required by law (applicable OSHA requirements, fire codes, and state departments of health) or required by the safety committee in response to high accident frequency or potential at the nonprofit.

Specific safety programs include:

- Back Injury Prevention
- Bloodborne Pathogen
- Fire Evacuation
- Hazard Communication
- Fleet Safety (transportation)
- Emergency Response
- Accident Investigation

Workplace safety programs should be included in the entity's safety manual. Individual components, such as floor-by-floor fire-evacuation plans, should be posted. The programs should be reviewed and updated at least annually to ensure quality, effectiveness and compliance with all applicable codes.

Safety Meetings

Meetings should be documented and kept on file for at least three years for reference. Duties of the safety committee vary, depending on the entity's size and the nature and severity of the location's hazards. To keep meetings on target and timely, distribute an agenda to committee members before each meeting. Record and file minutes of each meeting. Try to keep the meeting length to one hour.

The safety committee's monthly meeting agenda could include:

- Review or accident and investigation reports
- Overview of accident/incident trends
- Summation of in-service training sessions
- Results/findings of inspections
- New and outstanding safety issues
- Safety topic of the month

Facility Safety Inspections

Monthly workplace safety inspections and documentation help monitor adherence to workplace safety programs. A member of the safety committee should lead the inspection. Department representatives should participate in the inspection of their departments. Focus inspections on physical hazards and unsafe acts or operations. Start with areas or operations that show up as causes of accidents/incidents in previous monthly safety inspections and in the quarterly loss

analysis. Include fire hazards, security and other life-threatening areas. Correct any unsafe acts or conditions. Report the inspection results at the safety committee meeting. Create a "To Do" list of the committee's recommendations and assign people to correct them.

Quarterly Loss Analysis Report

Before the committee can make the workplace safer, it needs to identify accident trends and causes making it unsafe. This is the role of the quarterly loss analysis report, which goes into more detail than the monthly loss analysis that is part of the safety meeting. The committee should follow-up on and correct any cause or trend identified.

Safety In-Services

In-service training sessions increase safety and health awareness among staff, educate them about changes in procedure, and address specific areas of concern identified by the safety inspection. An annual schedule should be developed to ensure all content is covered.

Additional in-services can be provided as necessary, prompted by such factors as high frequency of accidents, turnover of employees, or expansion or reduction of staff. Document all training and attendance and keep it on file. In addition, each employee's personal file should have a cumulative record of the in-service meetings attended.

Annual Safety Report

The safety committee should produce a report at the end of each calendar year that summarizes its action. The reports serve as guideposts for future committee members. Submit the report to the chief elected official, administrator or risk manager for review and comment.

Include:

- Year's accomplishments
- Continuing accident and incident trends
- Action plans to modify trends or significant safety issues
- In-service schedule for the next year

Special Event Safety Committee

Some nonprofits convene a separate risk management/safety committee for a special event, such as a fund-raising benefit, staff planning retreat or health fair. The committee should be led by an individual who has overall responsibility and is authorized to take action if an emergency arises. The "safety czar" and committee should be involved in all facets of event planning and coordination. Sometimes the special event safety committee is a subcommittee of the overall safety committee, other times it is a separate committee headed by a member of the overall safety committee. The work of this committee should be summarized in a report to the whole and included in the overall safety committee's records.

Resources

Risk Management: A Technical Assistance Brief, A Guide to Risk Management, prepared by The Loss Control Department, The Hartford, © 2000 by American Association of Homes and Services for the Aging.

APPENDIX J

SAFETY & HEALTH MANUAL



CITY CORPORATION SAFETY POLICY STATEMENT

TO ALL EMPLOYEES:

The preservation of the life and health of our employees is of the utmost importance. Therefore, it is the intent of City Corporation to provide its employees with a working environment consistent with high standards of industrial safety and hygiene. To achieve this goal, management has implemented a Safety Program in an attempt to eliminate all known unsafe acts, conditions and potential hazards.

The real success of this program depends upon you, our employees. In order to provide the safest working conditions for all, every employee is expected to learn and follow all safety rules and regulations and take a wholehearted interest in strengthening the program.

SAFETY IS TO TAKE PRECEDENCE OVER SPEED AND SHORTCUTS. In no conditions or circumstances shall safety procedures be broken.

We expect all employees to join together in providing a safe atmosphere for one another and in striving toward a strong, effective and meaningful safety program.

It is the responsibility of all supervisors to see that the employees under him follow all safety requirements and rules. The supervisor will be held responsible for all accidents where he failed to provide a safe working environment.

CITY CORPORATION SAFETY ORIENTATION AND TRAINING

On the day of arrival each new employee shall be given a safety orientation by the immediate supervisor.

The orientation will include:

- a. An explanation of the safety policy and practices of the company.
- b. A tour of the site with identification of possible safety hazards.
- c. Emphasis on the responsibility of the employee for their own safety and that of others.

The employee is given a copy of pertinent safety material. As additional safety material is made available, copies will be distributed to all personnel.

The employee is instructed to learn the safety regulations and to consult the supervisor when in doubt.

The employee will sign a statement that he/she has read City Corporation's General Safety Rules, fully understands them and agrees to abide by them. This statement is retained in the employee's personnel file. Signing a copy of the rules and agreeing to them is a condition of employment.

All supervisors will hold monthly safety meetings with their employees to discuss pertinent safety topics. Meetings and employee attendance is documented.

Employee Signature Date

Supervisor Signature Date

GENERAL SAFETY RULES

1. If you are injured, no matter how slight the injury may be you must report *immediately* to your supervisor and received first aid treatment.
2. Approved personal protective equipment (eye, ear, head and foot) must be worn by all employees working in designated areas.
3. Back injuries are serious and every effort is to be taken to prevent them. All employees are to follow the Lifting Procedures found in the safety manual.
4. Never operate, repair or adjust, in any way, machinery or equipment unless you are authorized to do so by a supervisor.
5. Be absolutely sure no one is in a position to be injured and that all safeguards are in proper position before turning on electricity, gas, steam, air, water or setting any machinery or equipment in motion.
6. Check tools and equipment before using them. If any are found defective, do not use them and report them to your supervisor.
7. Good housekeeping is the responsibility of each employee. Keep your work area neat and clean at all times.
8. Stay clear of working machinery and be particularly careful in handling material.
9. For those driving a company vehicle a complete safety check of vehicle and equipment must be made before leaving the shop or plant site.
10. A City Corporation driver must be in possession of a valid Arkansas Operator's License at all times when driving company vehicles.
11. The carrying of unauthorized passengers in a City Corporation vehicle is strictly prohibited.
12. Drinking or possession of intoxicating liquor or illegal drugs or reporting for work while under the influence of either is prohibited and will result in termination.

CAUTION – If you don't know or if you are not sure, ask your supervisor: **It's better to be safe...than sorry.**

City Corporation Safety and Health Manual

Safety Program

The safety program contained herein has been prepared to assist employees in the safe and efficient performance of their duties. Workplace safety is of the utmost importance to City Corporation.

It is the duty of all employees to plan and carry out their job duties in the safest manner possible. The practice of effective accident prevention is mandatory and a responsibility to be shared by all employees.

Since it is not possible to cover every situation that might be encountered in the many operations of the utility, department heads and supervisors will be responsible for tailoring these guidelines to meet the requirements of each particular operation.

City Corporation's Safety Program is designed to go beyond this text. Employees may be required or encouraged to attend training courses addressing issues relating to personal safety as well as the safety of co-workers and citizens. These training sessions will focus on job related injuries and prevention.

Safety and Hazard Committee

The Network Operations Center Manager / Safety Director will be responsible for ensuring that City Corporation's Safety Committee meets on a regular basis, understands its responsibilities, and properly assumes the responsibilities set forth herein related to enforcing the Safety Program. The basic functions of a safety committee are to create and maintain an active interest in safety and to reduce accidents. The safety committee will discuss the current safety problems and seek solutions or ways of prevention of future accidents.

The Committee membership shall consist of the management team and individuals designated to serve on a 6-month term. All departments shall designate, preferably by peer recommendation, an individual to serve a 6-month term on the Safety Committee. Committee members shall nominate the Chairman of the Committee. The Committee will conduct regularly scheduled meetings.

The Committee shall:

- 1) Promote activities and provide a positive program to maintain employee interest in safety.
- 2) Recommend, coordinate, and/or plan safety programs to increase the awareness of safety issues among employees at all levels.
- 3) Regularly schedule, conduct, and supervise inspections of property and facilities to determine safety problems and recommend corrective actions (Committee may designate a two-person inspection team).
- 4) Monitor and, if deemed necessary, recommend safety training programs for employees.
- 5) Assist departments in integrating safety into the everyday activities of the department.
- 6) Supervise adequate recordkeeping of accidents, injuries, and illnesses resulting from on-the-job situations.
- 7) Coordinate and host any compliance visit by the Arkansas Department of Labor.
- 8) Review and revise the Safety and Health Manual during the first calendar month of each year.
- 9) Conduct accident investigations to determine causes of accidents and various methods for preventing future accidents of the same nature.

Responsibility

Department supervisors and lead operators are initially and ultimately responsible for accident prevention within their respective departments. This responsibility is delegated to the supervisors through management directives and the safety program. Each department shall establish safety performance goals and maintain accurate performance and accident records. Goals and records will be reviewed regularly and appropriate action will be taken.

Supervisors are charged with the responsibility of preventing accidents and maintaining safe working conditions. They must cooperate and work with the Managers regarding safe operation of mechanical equipment. Supervisors must be familiar with the safe method and procedures required for the work to be performed under their supervision. They must set an example for other employees by practicing proper safety procedures at all times. **Supervisors will be responsible for furnishing a detailed explanation of applicable safety and hazardous materials procedures to new employees (other than that information that is provided during the Human Resources Department orientation) and for ensuring that these procedures are understood and followed.** They are also responsible for general housekeeping in and around their respective work areas. Each accident shall also be investigated and analyzed by the appropriate supervisor and manager, and a written report will be submitted to Human Resources.

Employees must abide by the adopted safety procedures at all times. Those found in violation of safety procedures will be subject to disciplinary action. Approved uniform and required personal protective equipment (PPE) shall be worn while on the job. Employees are expected to observe general housekeeping rules and to assist in maintaining their respective work areas in a clean and sanitary condition. **Employees must immediately report all accidents, incidents, and near misses (no matter how minor) to their supervisor.**

Accident Reporting, Investigation & Analysis

Any accident, incident, or near miss, no matter how slight the injury or damage must be reported to the department supervisor immediately for appropriate action. The supervisor is responsible for taking appropriate follow-up action, including getting medical attention for the injured, completing an investigation report and recommending or implementing appropriate corrective actions.

ACCIDENT - an undesired event or sequence of events causing injury, ill-health or property damage.

INCIDENT - is an unplanned, undesired event that hinders completion of a task and may cause injury or other damage.

NEAR MISS - describes incidents where, given a slight shift in time or distance, injury, ill-health or damage easily could have occurred, but didn't this time.

Accident Investigation Procedures:

- 1) The supervisor is required to notify Human Resources immediately to allow sufficient time to prepare for and conduct an investigation and other processes including medical care and drug/alcohol screening.
- 2) Investigation forms will be obtained from Human Resources or Network Operations Manager's office; reports will be completed by the supervisor as soon as possible, but no later than 24 hours after the accident.
- 3) After an accident the supervisor will take pictures of any damage or other details which may be useful in the accident investigation.

The Network Operations Manger / Safety Director Human Resources will review and report all accident investigations to the Safety Committee on a monthly basis.

Disciplinary Program

Deviation from approved safety regulations will be considered misconduct. It is imperative that all employees and supervisors follow safety rules. If any employee's misconduct is deemed to be seriously negligent City Corporation may bypass the disciplinary program and suspend or terminate the employee immediately.

The nature of the disciplinary action should be in line with such factors as severity, prior history, adequacy of prior training, and length of service to the organization and time on current job. For any employee who violates approved safety rules, City Corporation will enforce the following disciplinary actions:

First offense – counseling/retraining/written warning

Second offense – suspension

Third offense – dismissal

Health and Safety Education and Training

Supervisors are responsible for ensuring that specialized training (such as confined space and HAZCOM) is provided and documented before employees are required to perform tasks that could potentially expose them to health or safety concerns.

General Safety Information for City Corporation Employees

Main Causes of Accidents:

- 1) Improper Tools or Equipment – employees are responsible for knowing and using the proper tools for each job duty.
- 2) Unsuitable Method – a safe employee knows the proper method of performing each duty. If an employee is in doubt as to how to complete a task safely, the supervisor shall be consulted.
- 3) Not Using Protective Equipment – every employee must use all safeguards and protective equipment as required.
- 4) Not Observing Rules and Regulations – rules and procedures are essential for smooth and effective operations. Suggestions are always welcome, but before deviating from the established rules an employee shall consult the supervisor.
- 5) Lack of Proper Instructions and Maintenance – machinery, tools, and operating equipment shall be inspected before use. Necessary repairs shall be reported to the supervisor immediately.
- 6) Negligence – employees shall think about others around them and not allow carelessness or neglect to endanger co-workers. Inattention, even for only a moment, can result in serious injury.
- 7) Inattention – employees shall keep their minds actively on the job. Daydreaming, worry, and horseplay can lead to accidents.
- 8) Housekeeping – a large percentage of reportable hazards can be classified as “poor housekeeping.” Clean equipment and work areas promote safe working conditions.
- 9) Lack of Communication – poor communication often causes accidents. Employees shall communicate effectively with every employee connected with the job to prevent accidents.
- 10) Medication – it is the employee's responsibility to apprise the supervisor when medication that might affect the safety of the operation or co-workers is being

used. A physician's certification may be required, so it is imperative that an employee contact their supervisor or the Human Resources department if concerned or there is a reason to believe that the medication will affect the ability to perform job duties safely.

- 11) Attire – employees shall maintain uniforms in good state of repair and wear them properly.
- 12) Use of Hand Tools – take good care of tools. Many injuries result from the use of defective or unsafe tools or improper use of tools. Keep cutting edges sharp. A sharp tool makes the work easier, faster, and safer than a dull one. Learn how to sharpen tools properly or have it done by an outside party. Inspect tools regularly to note damage. Repair or replace all damaged tools before they injure you or someone else. Tools which are not being used should be put away properly, on racks or in a suitable tool box. If it is necessary to carry tools with you, use a holster or sheath to protect the cutting edges and pointed ends to avoid injury to yourself and others. Use the right tool for the job.
- 13) Use of Portable Electric Tools – never use portable electric equipment unless you know it is in good condition. Questionable items should be inspected and tested by qualified maintenance personnel. Always report defective parts on any piece of equipment. Portable electric tools should always be grounded, either at the frame or by use of a three-wire conductor and plug. In wet locations, wear rubber boots and gloves or stand on a good insulating mat or platform. Use only low voltage equipment in such locations if possible. Never use or attempt to repair power equipment with which you are not familiar. Electrical cords should be protected from damage by oil and should not be left in aisles where they may be run over by trucks, equipment, or cause tripping.

First Aid and Health

First aid is the immediate and temporary care given to the victim of an accident or sudden illness until the services of a physician can be obtained.

General rules for first aid:

- 1) If you are injured, report it and get First Aid immediately.
- 2) If you become ill while at work, do not continue on the job. Report the illness to your supervisor. They will see that you get the proper medical aid.
- 3) Do your part to keep washrooms and toilets sanitary.
- 4) First Aid kits will be kept in all City Corporation vehicles and administrative reporting worksites.
- 5) Keep first aid kits stocked and in a sanitary condition.
- 6) Make sure that an adequate supply of drinking water is available at all times.

Operation of City Corporation Vehicles

The operation of company vehicles is a privilege that should not be abused. No employee will be directed to operate a vehicle for which they are not trained and certified by appropriate classification of driver's license. To do so is a violation of state law. All drivers of company vehicles and those using personal vehicles while performing company business shall comply with all applicable traffic laws.

Vehicle Operations Regulations:

- 1) Operators of company vehicles are required to perform the following daily pre-operational status checks:
 - Check all lights, including tail lights and turn signals.
 - Check gas, oil, and water levels.

- Check brakes.
 - Check tire pressures.
 - Clean windshield, windows, and mirrors.
 - Check emergency equipment (first aid kit, fire extinguisher, etc.)
- 2) All vehicles having any condition that would interfere with safe operation shall be immediately removed from service and necessary repairs made to bring the vehicle into a safe operating condition before any future operation of the vehicle.
 - 3) All drivers shall have a valid Arkansas driver's license. City Corporation shall determine the validity of each driver's license upon hire. Employees are, thereafter, required to immediately give written notification to their manager of the revocation of the individual's license. Driver's who violate this obligation will be subject to disciplinary action that could result in suspension or termination.
 - 4) All drivers and passengers will utilize seat belts.
 - 5) Employees only are allowed as passengers in City Corporation vehicles. The maximum number of passengers inside a vehicle is equal to the number of available operating seat belts.
 - 6) When backing a vehicle that does not have a clear view of the rear, the passenger will exit and assist the driver. If alone, the driver will exit the vehicle and inspect the area behind the vehicle prior to backing.
 - 7) During periods of limited visibility or any time windshield wipers are in use the vehicle headlights will be turned on.
 - 8) Drivers will not operate cell phones when vehicle is moving without an approved hands-free device.
 - 9) Trailers will be securely fastened to hitches; pintle claws will be secured with safety pin. Chains will be crossed and secured under hitch before moving.
 - 10) City Corporation vehicles shall not be parked in "No Parking" or designated handicap zones.
 - 11) Unattended vehicles will have the engine turned off, keys removed from ignition, and doors locked.

Special Equipment

Work boots are utilized and required for most employees working outside of the business office to protect feet from injuries resulting from dropped items, vehicle wheels, machinery, and nail puncture. Employees working in designated work sites are required to wear steel toed safety shoes prior to operating mowing or construction equipment.

Rain gear is to be worn in inclement weather and job sites where water is falling or spraying.

Gloves will be worn in designated job sites. Gloves will be in good repair and a type suited for the task to protect against cuts, needle sticks, abrasion, chemicals, heat, and electric shock.

Protective headgear will be worn to protect the head from falling objects, overhead equipment, and electric shock.

Respiratory protection is used to filter or otherwise prevent toxic substances from entering the respiratory system.

Protective clothing such as gloves, sleeves, aprons, leggings, and full suits protect against wounds, abrasions, bumps, etc.

Office Safety

- 1) Use handrails when ascending and descending stairs.
- 2) Do not stand on chairs, boxes or other items not intended for climbing.
- 3) Maintain passageways; keep isles clear of obstructions.

- 4) Do not open more than one file cabinet drawer at a time.
- 5) Always close file cabinet drawers when not being used.
- 6) Smoking is prohibited inside any City Corporation building or vehicle.

Temperature Extremes

Severe sunburn and illnesses caused by exposure to weather are among the most unnecessary of occupational hazards. Employees should use sunscreen and minimize their exposure by wearing loose fitting long sleeves, gloves, and hats to protect from sunlight. Drinking water will be supplied for all employees to prevent dehydration and heat injuries.

Cold weather requires layered clothing to protect employees from cold injuries. Protect your face and wear a muffler or mask over your mouth to protect the lungs while breathing cold air. Rapid cooling of exposed skin increases susceptibility to frost-bite, which causes loss of feeling and white or pale appearance in fingers, toes, tip of nose, and earlobes. Get medical attention immediately if you suspect frost-bite. Hypothermia occurs when the body loses heat faster than it can produce it. Symptoms include uncontrolled shivering, slurred speech, memory lapses, fumbling hands, stumbling, drowsiness, and exhaustion.

Poison Ivy, Oak, Sumac

Every year a certain number of employees come into contact with poison ivy, poison oak, or poison sumac. To help prevent exposure and the allergic or sensitive reactions to these plants, workers must be able to first *identify* them.

The compound leaves of poison ivy consist of three pointed leaflets; the middle leaflet has a much longer stalk than the two side ones. The leaflet edges can be smooth or

toothed but are rarely lobed. The toxic substance in poison ivy is the oil that is present in the plant throughout the year. The oil can be carried on clothing, pet fur, or in the smoke from burning the plant.



Poison Ivy

Poison Oak

Poison Sumac

Poison oak usually does not climb as a vine, but occurs as a low growing shrub. Leaflets occur in threes, as in poison ivy, but are lobes, resembling oak tree leaves.

Poison sumac, unlike poison ivy, grows as a coarse woody shrub, and has green flowers and loose clusters of white fruit. It has the same oily poisonous material as poison ivy and produces the same rash. Seek first aid and/or doctor's care as needed.

Bites and Stings

City Corporation field duties will expose employees to numerous opportunities for bites and stings from insects and snakes. The best protection is always avoidance; look before reaching bare hands into valve boxes, meter vaults, or other nooks and crannies. Be sure to positively identify the creature if bitten or stung. Use first aid to prevent infection, and seek immediate medical attention for allergic reactions.

Sprains and Strains

The most common injury resulting from workplace accidents nationally, as well as at City Corporation, is sprains and strains. The major contributors are slips, trips, and falls

resulting from walking on wet or cluttered surfaces, and improper body positioning while digging or lifting objects. The primary short-term focus of the Safety Program will be to lower/eliminate the number of sprains and strains. Prevention will consist of environmental and physical awareness training. Departments are encouraged to incorporate slip, trip, and fall awareness training on a quarterly basis.

Review and Revision

This manual will be updated annually, during the month of January. Revisions and updates will be reviewed and approved by the Safety Committee and Managers prior to implementation.

APPENDIX K

VEHICLE ACCIDENT SOP



CITY CORPORATION
Vehicle Accident SOP

An insurance card should be in all company vehicles. A laminated short SOP card should also be in the vehicle.

When an employee is involved in an accident in a City Corporation vehicle, they should report the accident immediately to Human Resources via phone (968-2080 ext. 115) if possible. If they do not have access to a phone, they should make contact by company radio. HR will then contact the police if necessary and will also contact the Manager/Supervisor.

When the Manager/Supervisor arrives on the scene, they should make a record of the insurance information of the other driver involved in the accident. Human Resources will advise the Manager/Supervisor to transport the employee to River Valley Occupational Health for a drug screening. The manager/supervisor will use their Reasonable Suspicion testing training to determine if a BAT (for alcohol) or a Collector (for drugs) should be administered.

If the accident occurred on private property, the Manager/Supervisor should also take a digital camera and take photographs of the damage (vehicles, property, etc) as there would be no police report. If the manager does not have access to the camera, they should report this to Human Resources who will see that pictures are taken. These photos and the insurance information should be returned to the Administrative Department. After the drug test has been administered, the Manager/Supervisor should then bring the employee to the Administrative Department for the accident report to be completed. The accident report will be reviewed by the General Manger and Administrative Manager upon completion. If the manager/supervisor has made a determination based on their Reasonable-Suspicion training that the employee is impaired, the employee should be driven to their home and not allowed to return to work. Consider disciplinary action if the employee refuses transport or call the police if you feel the employee will endanger others on the road.

If the employee is injured and requires medical treatment, a drug screening may be administered after treatment. If the injury requires admittance to the hospital, River Valley Occupational Health will go to the facility to administer the screening.

River Valley Occupational Health states that testing (Collector) be done with 32 hours of the accident. However, City Corporation policy requires that testing be administered within two hours. If two hours have passed from the time the Manager/Supervisor became aware of the requirement to test and testing has not been completed, the Manager/Supervisor must document this fact and the reasons why.

The vehicle should be taken for at least two (2) repair estimates. If the damage exceeds \$2,500.00, our insurance carrier will require digital pictures. If the damage exceeds \$5,000.00, the carrier will send an adjustor to inspect the vehicle. The estimates are returned to the Administrative Department. After Administrative Department receives instructions from the insurance carrier on proceeding with repairs the information will be forwarded to the manager.

If this accident occurs after regular business hours, the employee would notify their immediate supervisor/manager. The manager will call River Valley Occupational Health at their after-hours number (264-2425 or 970-7208 or 264-9170) and proceed with all above steps but will bring the employee into the Administrative Office at the beginning of the next regular business day.

CITY CORPORATION
VEHICLE ACCIDENT PROCEDURES

The employee is required to call 968-2080 ext. 115 immediately. If unable to make phone contact, the contact may be made via company radio. If the accident occurs after regular business hours, the employee should contact their immediate supervisor. The immediate supervisor will then advise of proper procedures to be followed.

APPENDIX L

PARKED TRAFFIC CONE PROCEDURE



City Corporation Parked Vehicle Traffic Cone Procedures

Purpose – traffic cones will be placed around every parked City Corporation motor vehicle to facilitate and encourage each operator to conduct a pre-trip vehicle inspection prior to operation. These procedures are a direct result of preventable vehicular damages and are designed to prevent future accidents.

Scope – this procedure shall be applicable to all City Corporation motor vehicles.

Procedures:

1. Every City Corporation vehicle will have two 18" fluorescent green un-stripped traffic cones as standard issue equipment for purposes of this procedure.
 - 1.1. Any available traffic cone is deemed an acceptable temporary substitute for a lost or stolen cone.
 - 1.2. The assigned operator will be responsible for replacement cost of a lost or misplaced cone.
 - 1.3. City Corporation will bear the cost of a properly reported stolen cone.
2. Upon parking a vehicle, the operator will place both cones around the vehicle to facilitate an operator walk-around pre-trip inspection prior to the next operation.
 - 2.1. When the vehicle is parked at an unmarked or unbounded marked parking space the cones will be placed at opposite corners (i.e. left rear and right front bumper) so that all four sides of the vehicle will be observed during the next pre-trip inspection.
 - 2.2. When the vehicle is parked in a space bounded by a curb both cones will be placed at the corners of the unbounded bumper so that three sides of the vehicle will be observed during the next pre-trip inspection.
 - 2.3. Placement of traffic cones for this procedure will not hinder the normal flow of traffic.
3. Prior to operating a parked City Corporation vehicle the operator will conduct a pre-trip inspection to retrieve the traffic cones.
 - 3.1. The operator will check for nearby equipment, vehicles, pedestrians, and blind spots prior to operating the vehicle.
 - 3.2. The operator will secure the cones inside the cab, bed, locked compartment, or placed on a mounted cone holder prior to operating the vehicle.
 - 3.3. Lost or stolen traffic cones will immediately be reported to the department supervisor or manager.
4. The Safety Committee will conduct an annual review and assessment of these procedures.

CERTIFICATION STATEMENT

I have read and fully understand the City Corporation Parked Vehicle Traffic Cone Procedures.

Name/Employee

Number: _____

Signature: _____

Date: _____

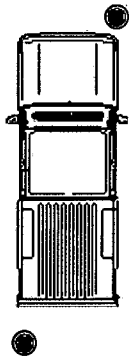
(Return to Safety Coordinator when completed)

APPENDIX M

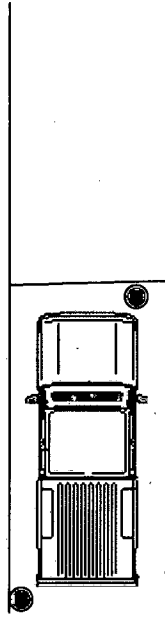
CONE POSITIONING



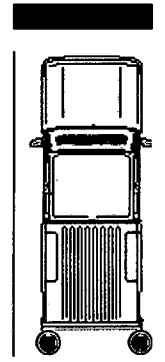
Cone placement diagrams:



Unmarked

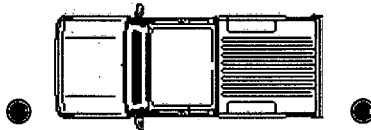


Marked, no curb



Marked w/curb

Street curb



APPENDIX N

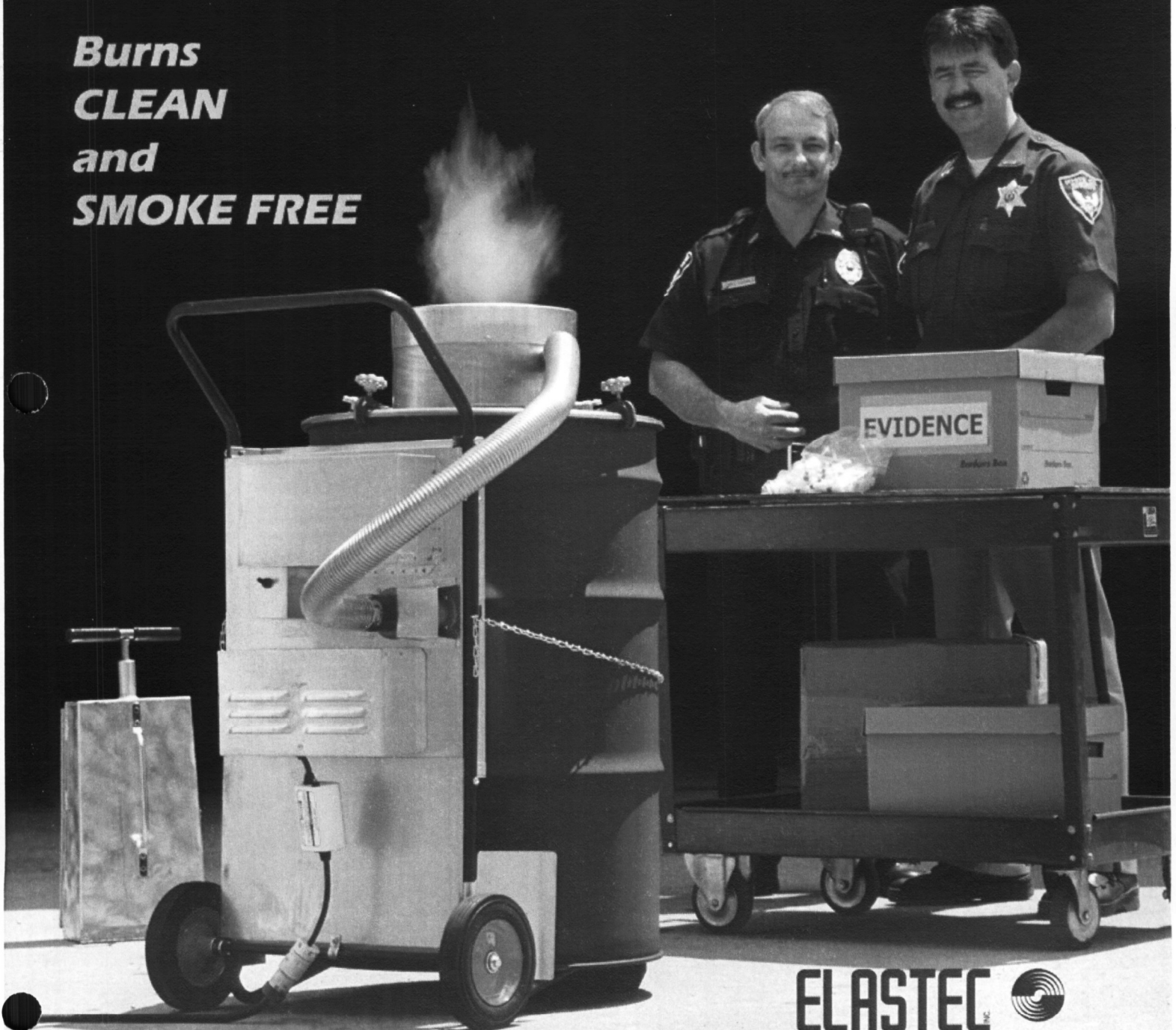
DRUG TERMINATOR POSTER



DRUG TERMINATOR

For Disposal of Confiscated Drugs

**Burns
CLEAN
and
SMOKE FREE**



www.drugterminator.com

ELASTEC 
AmericanMarine ^{INC.}
Innovative Environmental Products

APPENDIX O

PRESCRIPTION DISPOSAL GUIDELINES





Proper Disposal of Prescription Drugs

Office of National Drug Control Policy

October 2009

Federal Guidelines:

- ❖ Do not flush prescription drugs down the toilet or drain unless the label or accompanying patient information specifically instructs you to do so. For information on drugs that should be flushed visit the [FDA's website](#).
- ❖ To dispose of prescription drugs not labeled to be flushed, you may be able to take advantage of community drug take-back programs or other programs, such as household hazardous waste collection events, that collect drugs at a central location for proper disposal. Call your city or county government's household trash and recycling service and ask if a drug take-back program is available in your community.
- ❖ If a drug take-back or collection program is not available:
 1. Take your prescription drugs out of their original containers.
 2. Mix drugs with an undesirable substance, such as cat litter or used coffee grounds.
 3. Put the mixture into a disposable container with a lid, such as an empty margarine tub, or into a sealable bag.
 4. Conceal or remove any personal information, including Rx number, on the empty containers by covering it with black permanent marker or duct tape, or by scratching it off.
 5. Place the sealed container with the mixture, and the empty drug containers, in the trash.

Office of National Drug Control Policy
750 17th St. N.W., Washington, D.C. 20503
p (202) 395-6618 f (202) 395-6730



APPENDIX P

LINES TO BE REHABBED IN 7,14 & 23



APPENDIX Q

**EMERGENCY/DISASTER RESPONSE PLAN
WITH EMERGENCY CONTACTS**



Emergency/Disaster Response Plan

To continue minimum service levels and mitigate the public health risks from drinking water contamination that may occur during a disaster or other emergency events and in order to provide reliable water service and minimize public health risks from unsafe drinking water during those events, CITY CORPORATION water system proposes the following plan that defines how it will respond to emergencies and/or disasters that are likely to affect its operation.

Disasters/emergencies that are likely to occur in the water system's service area that are addressed are: earthquake, major fire emergencies, water outages due to loss of power, localized flooding, water contamination and acts of sabotage.

- 1) **DESIGNATED RESPONSIBLE PERSONNEL:** For designated responsible personnel and chain of command and identified responsibilities, see the attached "Emergency and Disaster Personnel and Responsibilities".
- 2) **INVENTORY OF RESOURCES:** An inventory of system resources that are used for normal operations and available for emergencies; includes maps and schematic diagrams of the water system, lists of emergency equipment, equipment suppliers, and emergency contract agreements that are kept at the water system office.
- 3) **EMERGENCY OPERATIONS CENTER:** The water system office has been designated as the communication network emergency operations center. Emergency contact information for equipment suppliers is attached. The telephone and FAX will be the primary mode of communication in an emergency. In addition, the local fire department and law enforcement have a radio and we have made arrangements to use it to contact police, fire and other emergency response personnel should telephone communication be lost.

Agency	Address, City	Phone #	FAX #
Water System	205 West 3 rd Pl Russellville, AR	479-968-2105	479-968-3265
Fire Department	203 W 2 nd St Russellville, AR	479-968-2232	479-967-2087
Law Enforcement	115 W H St Russellville, AR	479-968-3232	479-968-8621

- 4) **OTHER AGENCY COORDINATION:** Coordination procedures with governmental agencies for health and safety protection; technical, legal, and financial assistance, and public notification procedures are continually being developed and updated through regulation and experience and will be added as necessary to this plan. (See attached sheet.)
- 5) **RESPONSE PROCEDURES:** Personnel will, as quickly as possible, determine the status of other employees, assess damage to water system facilities, provide logistics for emergency repairs, monitor progress of repairs and restoration efforts, communicate with health officials and water users according to the "Emergency Notification Plan" on file with the regulatory agency (i.e. Department of Health Services (DHS) or Local Primacy Agency (LPA)), and document damage and repairs.
- 6) **RESUME NORMAL OPERATIONS:** The steps that will be taken to resume normal operations and to prepare and submit reports to appropriate agencies will include identifying the nature of the emergency (e.g., earthquake-causing water outage/leaks, fire or power outage causing water shortage/outage, sabotage resulting in facility destruction or water contamination).
 - a. **Leaks or service interruption (Result of earthquake, etc.)**
 - i. Isolate leak. Turn power or flow off, if necessary, to control leak.
 - ii. Repair or isolate break to allow service to the maximum system population possible. Disinfect as per attached AWWA Standards; increase system disinfectant residual as precaution, until normal service is resumed.
 - iii. Do bacteriological sampling until 3 good consecutive samples are confirmed.
 - iv. Reestablish normal service.
 - b. **Low pressure (Result of earthquake, fire, storm)**
 - i. Increase production, if possible, to provide maximum system output.
 - ii. Increase disinfectant residual as precaution to potential contamination.
 - c. **Power outage**
 - i. Place emergency generator on-line to provide minimum water pressure to system.
 - ii. Increase disinfectant residual as precaution to potential contamination.

d. Contamination

- i. Identify location and source of contamination.
- ii. If contamination is from system source, isolate or treat source.
- iii. If contamination is an act of sabotage, take appropriate action based on nature of contamination. Immediately contact local law enforcement and your regulatory agency (DHS or LPA). Actions should be taken in consultation with the regulatory agency and could include shutting off water until all contaminants are identified.

e. Physical destruction of facility (sabotage)

- i. Immediately contact local law enforcement and regulatory agency for consultation.

All significant water outages (widespread and lasting more than eight hours) or disinfection failure will be reported to the Department of Health Services (DHS) District Office, or Local Primacy Agency (LPA) by telephone or equally rapid means. All emergencies will be documented along with action taken, and kept in the files of the water system office. Acts of sabotage will be reported to the local law enforcement agency.

EMERGENCY AND DISASTER PERSONNEL
City Corporation Board of Directors

Travis Adams, Chairman
PO Box 10
Russellville, AR 72811-0010
479-968-3278

Peggy Stratton, Vice-Chair
701 E. Main St., Ste 8
Russellville, AR 72801
479-967-7300

Dave Palfreeman, Secretary
1805 E Parkway Drive
Russellville, AR 72801
479-968-1361

Tommy Richardson, Senior Member
205 Quarry Road
Russellville, AR 72802
479-968-7540

Don Guess, Junior Member
308 Wisteria Ct
Russellville, AR 72801
479-967-3794

Craig Noble, General Manager
221 Hillview Cove
Russellville, AR 72802
479-747-2710

Larry Collins, Operations Manager
10475 Boyce Manor Cir
Dardanelle, AR 72834
479-968-5197

Additional Mutual Assistance or Emergency Resources

AGENCY	TELEPHONE # (DAY) TELEPHONE # (AFTER HOURS)
Russellville Fire Department	479-968-2332
911	479-968-0911
Emergency Response Commission	479-968-6937 or 479-968-1800
Russellville Police Department	479-968-3232
Arkansas Dept of Emergency Mgt	1-800-322-4012 or 501-683-6700
FBI Little Rock Office	501-221-9100
DHS District Office	479-968-3254

City Corporation Contact Information:

Craig Noble, General Manager
221 Hillview Cove
Russellville, AR 72802
479-747-2710

Larry Collins, Operations Manager
10475 Boyce Manor Cir
Dardanelle, AR 72834
479-968-5197

Emergency Contact Numbers and Operational Practices

- A. List of equipment on hand for emergency repairs**
1. (Miscellaneous pipes and fittings, 2", 4", 6" & 8", valves, saddles, couplings, etc.
 2. Portable Generators: (1) 505 kw and (2) 125 kw.
 3. Backhoe, power tools and equipment
- B. List of sources of needed equipment, not on hand**
1. Kirby Specialties (479) 968-5416
(Sources for backhoe, jackhammer, technical support. Sources under contract.)
 2. Russellville Machine & Tool (479) 968-5790
(Sources for electrical and pump repair.)
 3. CAT Rental (479) 968-3304
(Sources for emergency generators in case of prolonged power outages.)
- C. List of distributors or suppliers of replacement parts for the system**
1. HD Supply (800) 374-3727
(Sources for PVC pipe, valves, and fittings.)
 2. Water Products (479) 361-2830
(Sources for pumps, pressure tank, and gauges)
 3. River Valley Winwater (479) 967-0553
(Sources for PVC pipe, valves, and fittings.)
- D. List of emergency contact numbers:**

	NAME	PHONE (DAY)	PHONE (AFTER HOURS)
DHS District Office	Pope County Health Dept	479-968-6004	479-890-5453
Local Environmental Health Agency (LPA)	Bill Bolin	479-968-3254	
Electrician	Eddie Woestman	479-967-1553	479-857-3300
Laboratory	EEG, Inc.	479-968-6767	
Electric & Pump (Repair Service)	Electric Motor Center	479-968-2532	
Chemical Disinfectant Supplier	Harcross	501-565-8446	
Other Water Agency (equipment support)	Conway Corp	501-450-6000	
Fire Department		479-968-2332	911
Law Enforcement	Local Police	479-968-3232	911
County Office of Emergency Services		479-968-1800	911

8/27/2009 INDUSTRIAL AND EMERGENCY CONTACTS

ALCAN PACKING (thermo-plate)
3606 E 16TH ST
880-8077

NIGHT RINGER
MAINTENANCE
880-8077

AMERICOLD LOGISTICS
203 INDUSTRIAL BLVD
967-2900

24 HOUR PLANT

JASON JOHNSON
479-970-5446

ARK NUCLEAR ONE
LONDON
858-5314
858-5315

LAB
858-3551

OUTAGE #
858-3555
964-6329 pager

ARKANSAS TECH
(Maintenance)
968-0261

DENNIS HILL
223-0048 cell

ATKINS WATER
641-7853

TREATMENT PLANT
968-2782

INTERNATIONAL PAPER SHEET FEEDER
3019 E 16TH
890-6634

PAUL TURNER
890-6634 EXT 18

BIBLER BRO LUMBER
2400 S ARKANSAS
968-4986

TERRY FREEMAN
PRES
967-8676

KEVAN FREEMAN
858-2311

CONAGRA
3100 E MAIN
968-2535

CLIFFORD DEPRIEST
MAINTENANCE MNGR
968-2535 EXT 211

RICK MASKE
SAFETY & COMPLIANCE
MNGR
968-2535 EXT 205
CELL 970-7691

JIM DUNN
886-1042

DARDANELLE WATER PLANT
479-229-3992
DARDANELLE WASTEWATER
479-229-4538

AFTER HOURS
479-229-2533

8/27/2009 INDUSTRIAL AND EMERGENCY CONTACTS

DOVER WATER PLANT
331-3270

YANCY POYNTER
331-3668
CELL 970-8118.

DOW CHEMICAL
3230 DOW RD
968-0982

AFTER HOURS
968-6028

ENTERGY
V.I.P. LINE
1-800-766-1648
1-501-396-4230

JIMMY FRYE
964-5754
964-5752

BRUCE TUCKER
964-5728

FIRESTONE
2700 E MAIN
968-1443

LORRIE CHESSER
964-0276

POWER HOUSE
968-1443

GOODY'S
500 INDUSTRIAL RD
967-3467

MIKE BRYANT
967-2680

GRACE MANUFACTURING
614 SR 247
968-5455

CONNIE RAGSDALE
968-5455 EXT 1033

HACKNEY LADISH
708 S EL MIRA
964-6203

ROBERT TAYLOR
HUMAN RES
964-6211

JOHN MONTGOMERY
ENGINEER
964-6220

HUCKLEBERRY CREEK
331-2953

INNOVATION INDUSTRIES
3500 E MAIN ST
968-2232

PAUL HORNEY
968-2232

AMBER DILDAY
CELL 479-857-2331

INTERNATIONAL PAPER
3900 INTERNATIONAL DR
964-2227

BRANDON MCDANIEL
964-2235

RON SANDERS
967-1507
OFC 964-2230

JW ALUMINUM PRODUCTS
777 TYLER RD
858-6700

JIMMY WARD
GENERAL MNGR
858-6724

JOHNNY EINERT
MAINTENANCE
858-6720

8/27/2009 INDUSTRIAL AND EMERGENCY CONTACTS

LONDON WATER
293-4513

MAHLE
2301 E 16TH
967-8797

DAVID SHEETS
EH&S
890-4414

JOE LOOPER
ENGINEER
890-4443

P.O.M
200 S EL MIRA
968-2880

BRENT HUNEYCUTT
968-2880

MELISSA OATES
968-2880

POTTSVILLE WATER
968-2782

PREMIUM PROTEIN
HWY 7T
968-2567
24 HOUR
968-2567
OPERATION

BENTLY HOLLINGSWORTH
968-2567

RUSSELLVILLE FIRE

RICHARD SETIAN
968-2332
CELL 264-7097

JOHN COCHRAN
968-2332

SUGAR CREEK (ESKIMO PIE)
500 W C
968-1005

LARRY DILDAY
968-1005
CELL 857-0651

SCOTT VAN HORN
968-1005
CELL 264-1118

SUPERIOR GRAFITE
3225 DOW RD
968-8810

STEVE CONDLEY
968-8810 OR
501-893-2047

CHARLIE MCCLURE
968-8810 EXT 13

TABER EXTRUSION
915 S EL MIRA
968-1021

CLINT HAWKINS
ENGINEER
968-1021 EXT 245

TRACER COMMUNICATION
890-6499

8/27/2009 INDUSTRIAL AND EMERGENCY CONTACTS

TRI-COUNTY WATER
5306 HWY 7 N
968-6268

HARRY WILLARD
CELL 970-3890

JOHN CHOATE
CELL 970-7571

TYSON HATCHERY
1115 ELMIRA AVE
964-4203

SUSAN DANZY
HATCHERY MNG
964-4203

PAT POLLACK
COMPLEX ENVIRO MNG
479-229-8727

TYSON
RDC
702 E MAIN
964-4307

MARK JOHNSON
968-8922 OR
964-0618

TYSON
TYLER RD
964-4465

FELECIA HARRIS
(501)945-7131
EXT 129

RICK OWENS
PRETREATMENT PLANT
498-0416

WOESTMAN ELEC
503 E THRID
967-1553

EDDIE WOESTMAN
CELL 857-3300

ZERO MNT
3210 SR 324
967-3898

STEVE ACORD
479-264-2413

COMPANY GASOLINE ACCOUNTS:

PDQ
TAYLOR OIL

Entergy outages VIP number 1-800-766-1648, below are the stations and the account numbers
 Jimmy Fry's number is 479-964-5752. Please copy & post for emergency use.

WATER

STATION NAME	911 ADDRESS	ENTERGY ACCOUNT NUMBER	METER NUMBER
14TH & HOUSTON	803 W 14TH ST	36255263	3072565
7S PUMP STATION	803 W 14TH ST	36302180	3045302
ATKINS PUMP STATION	291 GALLA PARK RD	36302032	KC2082249S
BAYOU RIDGE TANK	510 GARDNER LN	none	none
BUNKER HILL TANK	398 BENNETT RD	36302065	CAA1109774
BUNKER HILL VALVE	HWY 331	36302073	CAA350496
E 2ND ST PUMP STATION	2306 E 2ND ST	36301935	KZD3169493K010355
FORREST HILLS TANK	1500 HILLTOP DR	36302024	K551057V6
HWY 7 SOUTH TANK	4027 S ARKANSAS	36302099	KBB912548M
I-40 TANK	350 FURNITURE RD		
INDUSTRIAL PUMP STATION	1898 E L ST	762070	3128234
LONDON PUMP STATION	20 WOODS LN	699041	3081003
NORRISTOWN TANK	608 SKYLINE DR	36302131	XKBB889363M
RAY LEE TANK	1400 E GUM ST	36302172	KBB995052
RAY LEE PUMP STATION	20 STEEL CITY LN	36302054	3040035
WEST MAIN PUMP STATION	3190 W MAIN PL	36301992	3024059
WEIR RD TANK	1795 WEIR RD	72825409	7386191
WESTERN HILLS TANK	2298 SKYLINE DR	36302123	3087779
WATER PLANT TRANSFORMER	99 WATER WORKS RD	36311561	NA
WATER PLANT BOOSTER	99 WATER WORKS RD	36310704	NA
CITY CORPORATION MAIN OFFICE	205 W 3RD PL		
CITY CORPORATION METER SHOP	326 S BOULDER AVE		
CONSTRUCTION OFFICE	3105 S MOBILE		

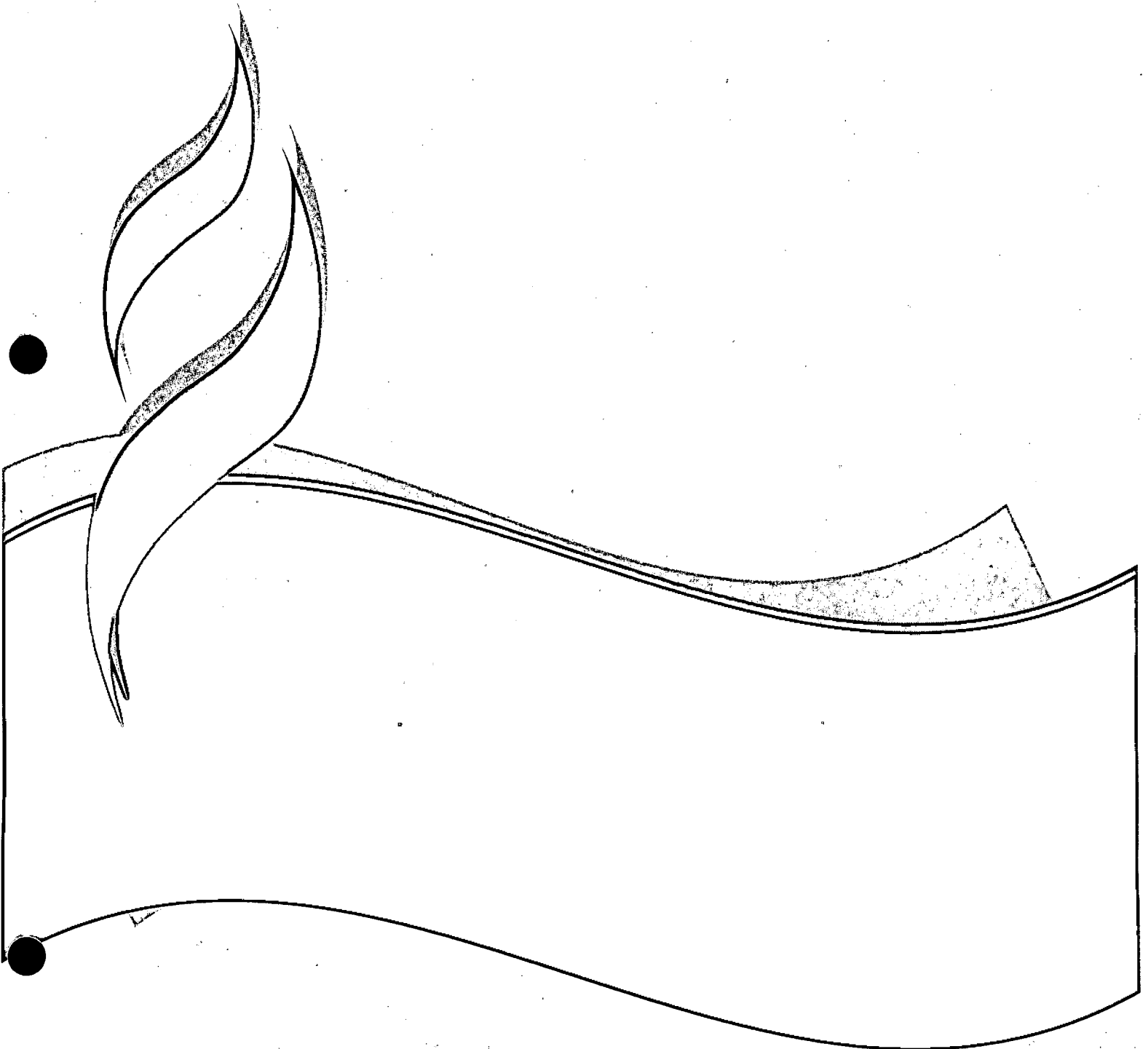
ARKANSAS VALLEY ELECTRIC CO-OP OUTAGE NUMBER 1-800-468-2176

STATION NAME	911 ADDRESS	ENTERGY ACCOUNT NUMBER	METER NUMBER
HCR MAINTENCE BUILDING	668 RESERVOIR LP	112957-002	4-045-839
HCR CHEMICAL BUILDING	748 RESERVOIR LP	112957-001	6-762-893

Entergy outages VIP number 1-800-766-1648, below are the stations and the account numbers			
Jimmy Fry's number is 479-964-5752. Please copy & post for emergency use.			
SEWER			
STATION NAME	911 ADDRESS	ENTERGY ACCOUNT NUMBER	METER NUMBER
10TH STREET PUMP STATION	198 E 10TH ST	36302156	3072470
23RD STREET PUMP STATION	2320 S FRANKFORT	36302149	XKC582352V6M
CENTER VALLEY PUMP STATION	5399 SR 124	36302198	3117307
COVE LANDING	1702 BRADLEY COVE RD	36301927	3161779
GRACE PUMP STATION	610 SR 247	761973	B7D3106295B014945
INTERNATIONAL PAPER	3995 INTERNATIONAL DR	36301885	3072516
LOST CORNERS	197 VISTA RIVER CT	36301943	TEG2070816KZ90658
MAIN ST PUMP STATION	610 E MAIN ST	36302164	Y8G3088079K010158
OLD POST PUMP STATION	802 LOCK & DAM RD	36301950	3138046
PRAIRIE CREEK PUMP STATION	797 N GLENWOOD AVE	757617	
PUMP STATION A	115 CLEAR LAKE DR	36302107	3081831
PUMP STATION B	2150 MARINA RD	36302115	KCC2000643S
PUMP STATION C	1204 MARINA WAY	36301976	3106636
RIMROCK PUMP STATION	1 RIMROCK RD	36301901	3118980
S FRANKFORT PUMP STATION	3102 S FRANKFORT	36302040	3097139
SHADOW VALLEY PUMP STATION	601 VALLEY DR	36302008	K1247548CV
SHILOH MANOR PUMP STATION	4007 SHILOH MANOR DR	57738108	TED3202897k010372
TEX VIT	495 N WACO AVE	36301984	3015275
TYSON 64 E PUMP STATION	5030 E MAIN ST	36301893	KC2009032S
CITYCORPORATION MAIN PLANT	404 JIMMY LYLE RD	36310423	
WWTP ACCOUNT TRANSFORMER	404 JIMMY LYLE RD	36311025	NONE
CONAGRA PTP	3100 E MAIN	36302081	3028238

APPENDIX R

GREASE TRAP INSPECTION SCHEDULE



R-GREASE TRAP - FACILITY LIST

Customer	Address	Billing Address	Contact	Serial #		Pumper	Date Pumped
7-40 Super Club	2807 N.Arkansas	P.O.Box 601 Rsvl.Ar.72811-0601	Bob Horton 970-9750	GT 0061	12	Reed's	2/20/2012
Abu's Gyros	605 N.Arkansas	Rsvl. 72801	Marwan Aboul-Zelof 619/316-5710	GT 0014	6	TRS	10/29/2012
Ahrens Fourt St. Laundry	320 E. 4th. St.			GT 0178	12	TRS.	6/12/2012
Arby's	915 E.Main	U.S.Beef Corp.4923 E.49th.St, Tulsa, OK 74135	Wilma 501) 562-7106	GT 0029	3	Lyles	10/19/2012
Arby's (1000gal's)	2323 N.Arkansas	U.S.Beef Corp.4923 E.49th.St, Tulsa, OK 74135	Shelley Hughes 857-6824	GT 0054	6	Lyles	3/25/2013
Ark. State Highway Dept.	370 E. Aspen Ln.	P.O.Box 70 Rsvl. Ar. 72811	Monte 968-2286	GT 0012	12	Safety-Kleen	3/7/2012
ATU. Williamson Bldg. (nis)	1205 N.El Paso	ATU.Physical Plant Rsvl. 72801	Brian Lasey 968-0261	GT 0157	12	Reeds	8/15/2011
ATU> Techionary	306 W. O. St.		NEW	GT-0175	6	Reed's Septic	6/20/2012
Brangus	1509 E.Main	Russellville,Ar.72801-5326	Mike/Matt Brady 968-1999	GT 0147	3	TRS	12/27/2012
Brick Oven Pizza	401 S.Arkansas Ave.	Ruvl. Ar.72801	967-7900	GT 0125	6	Murdock	11/5/2012
Brock's Dog House (nis)	113 N.EIPaso	Russellville,Ar. 70801	Richard Bucher 967-3557	GT 0159	12	Ford Mgt.	10/31/2012
Brown's Catfish	1804 E.Main	Alvin Brown DBA, P.O.Box 487, Russellville, AR 72811	Alvin Brown 968-3360	GT 0037	12	Murdock	3/31/2011
Burger King	1420 E.Main	Circle N Investment 2900 Grand Ave.Ft. Smith, AR 72901 479(783-8880)	John 970-1602	GT 0034	6	Roto-Rooter	10/15/2012
Burger King 3064	2306 N.Arkansas	Circle N Investment 2900 Grand Ave.Ft. Smith, AR 72901 479(783-8880)	John Jennings 479/970-1602	GT 0055	6	Roto-Rooter	7/11/2012
Cash Saver (three guy's)	3301 W. Main St.	Skyline Joint Ventures	Diane Dollar 968-2559/264/4232	GT 0064	12	TRS	9/27/2012
C.J.Burgers	2803 N.Arkansas	Russellville,Ar. 72802-8986	Richard Wilson 968-2300	GT 0060	12	Roto-Rooter	6/13/2011
The Carpet Shack	1512 S Arkansas Ave		Rick Latham 967-7748	GT 0122	0	inactive	Inactive
Catherin's Cake	311 W.B.St.	Russellville,Ar.72801 (cell 223-2319)		GT 0127	12	TRS.	12/4/2012
Center Valley Elementary	1204 SR. 124	Rsvl. (Not in system)	Westley Roach 968-4540	GT 0156	12	TRS.	8/2/2012
Central Presbyterian	400 W.Main	Russellville,Ar.72801-3794	Dough 968-1238	GT 0015	12	Murdock	8/10/2011
Chick Fil A	3089 E.Main St.			GT-0171	6	TRS.	10/30/2012
Community Development Inst.	1610 S. Arkansas Ave.	2707 E. H. St.Rsvl. 728	Sandra Johnson 567-5629	GT 0149	12	Murdock	4/21/2011

R-GREASE TRAP - FACILITY LIST

Customer	Address	Billing Address	Contact	Serial #		Pumper	Date Pumped
Church of Christ West-Side	2300 W.C.st.	Russellville,Ar. 72801-2503	Frank Foster 880-6845	GT 0025	0	Murdock	inactive
Cici's Pizza (nis)	3063 E.Main Ste.C	BFE Pizza DBA. 217 Gate House Rd.Hot Springs, AR 71913	Mark Groff 501) 620-0626	GT 0155	3	Lyles Co.	5/21/2012/21
Cogswell Collision Center	300 S. Sidney Ave.	Rsvl. Ar. 72801	Pat Johnson mgr. 968-4471	GT 0153	12	Murdock	5/3/2012
Cogswell River Valley Trucks	2911 S. Arkansas Ave.		Joey Barrett 479/ 498-7846	GT 0184	3	Roto-Rooter	12/5/2012
Colton's Steak House,	2320 N Arkansas	5 Shackelford Piz.Ste.100, Little Rock AR 72211-1889 Randy Bell	Alison Frazier 880-2333	GT 0056	6	Brooks	1/10/2013
Cracker Barrel	211 E.Harrell Dr.	P.O.Box 787 Lebanon,Tn.37088-0000	968/5983	GT 0022	6	TRS.	9/13/2012
Cracker Box	801 N.Arkansas	110 Cracker Box Ln.Hot Springs, AR 71913-		GT 0154	0	Inactive	Inactive
Cumberland Presbyterian	1200 N.Arkansas	Russellville,Ar. 72801-2939	Gene 968-1061	GT 0124	12	Murdock	4/2/2012
Dairy Queen	2007 E. Main	Russellville,Ar.72802-5361	Christina 858-6420	GT 0048	3	Brooks	12/27/2012
Denny's Reataurant (nis)	42 Bradley Cv.	Russellville,Ar. 72802 2000gals	Diana Brixley 498-2390	GT 0057	3	Lyles 501/227-9042	8/29/2011
Dixie Café	105 E.Harrell Dr.	1000gals.	968-4800	GT0023	4	TRS.	6/5/2012
Dos Rios Mexican	2211 N.Arkansas	Russellville,Ar.72802-2217	Juan Enriquez 903/217-4204	GT 0057	0	CLOSE	
El Parian	2621 W.Main	Ste.1 Russellville,Ar.72801-2551		GT 0028	0	CLOSE	
Exxon Tiger Mart 968-3258	203 S Arkansas	P.O.Box 1330 Beebe,Ar.72012-1330	Corp. 501/ 882-5220	GT 0123	12	TRS.	8/2/2012
Exxon/Tiger Mart # 106	2402 N. Arkansas Ave.	Rsvl. 72811	968-2966	GT 0053	12	Roto-Rooter	8/16/2012
Exxon	1103 E. 16th. St.	Rsvl. Ar. Nick 949/466-0108	David Sreedar 501) 733-8343	GT 0031	12	Roto-Rooter	4/16/2012
Fat Daddy BBQ (nis)	7206 Hwy 64 S.	not in the system		GT0159	12	TRS.	2/6/2012
First American Shipping	4480 E.Main St.	Rsvl. Ar. 72802	Roxanne DeMarco 967-0227	GT 0040	3	Roto-Rooter	11/12/2012
First Assembly of God	124 E. G. St.	Russellville,Ar. 72801-3822	Diane 968-2622	GT 0005	6	TRS.	10/2/2012
First Baptist Church	200 S.El Paso	P.O.Box 36 Rsvl. 72811	Darren Richardson 968-1316	GT 0017	3	Roto-Rooter	12/21/2012
Freedom House	400 Lake Front Dr.	Rsvl.72802 Gary Rhodes 857-4369 cell	Martice 968-7086	GT 0069	6	TRS	9/29/2012
Friendship Apts.	1010 E. M St.	Grace House	Sam 264-0511	GT-0170	12	Roto-Rooter	9/29/2012

R-GREASE TRAP - FACILITY LIST

Customer	Address	Billing Address	Contact	Serial #		Pumper	Date Pumped
Gambino's Pizzeria	2410 E. Main St.	501/365-6805/6630	Michael/Marianne Warth	GT-0072	0	inactive	Inactive
Happy Hibachi	107 N.EIMira Ave.			GT 0180	6	TRS.	12/5/2012
Hardees	1201 W Main	Nicholas Shutgot Saddle Peak I.L.C., PO Box 7971 Madison, WI 53791	Kim 968-6300	GT 0026	6	Roto-Rooter	11/14/2012
Hardee's	3095 E. Main	" " " " " " " " " "	Twila Hurtado 890-5986	GT 0043	6	Roto-Rooter	11/14/2012
Harp Foods	100 S.Knoxville	P.O.Box 48 Springdale,Ar.72765-0048	Donnie Sims 967/4345	GT 0030	6	Roto-Rooter	8/17/2012
Hob.Nob Shell (nis)	20 Bradley Cove Rd.	1000 gals.	Not in the system	GT0158	12	TRS	10/30/2012
Hog Wild Family Fun Center	301 N.Sidney Ave.	Rsvl. Ar. 72802	Buddy Grimms 479/264-6260	GT 0049	12	TRS	10/31/2012
Inglesia LaLuz Mondo Church	1412 S Arkansas	Russellville,Ar. 72801-6767	Walter Morales 479/747-6271	GT 0101	0	TRS	3/20/2012
I-Hop	401 E.Harrell Dr.	Russellville,Ar. 72802-2276 (Stacey)	Stacy 968-4467	GT 0021	6	Value Stream	12/27/2012
Imperial Catering	1310 S.Elmira	Rsvl. 72802-9648	Bob Wylie 877/836-0155	GT 0038	12	new trap	4/4/2012
Italian Gardens	315 W.Main	Rsvl. 72811	Spence 967-1707	GT 0016	6	TRS	8/2/2012
Jackson Brothers Vending	1601 S Knoxville	CLOSE		GT 0032	0	Inactive	Inactive
Jimmie Café	1321 E.Main St.	2192 S.Elmira Ave. Rsvl Ar. (350 gals).	Kate Riggs 479/264-7696	GT 0051	6	TRS	2/14/2011
Kentucky Fried	720 N.Arkansas	600 Edgewood Dr. Maumelle, Ar. 72113	Peachy 968-1568	GT 0006	12	Lyles	8/10/2012
Kroger 617	2804 S Arkansas	Close		GT 0087	0	Inactive	Inactive
Kroger 624	1111 W.Main	P.O.Box 290396, Nashville, TN 37229	Patsy Kenedy 901/765-4208	GT 0027	3	Lyles	11/29/2012
La Chiquita Meat&Deli	1509 E.Main St. Ste3	Russellville,Ar. 72801-5350	Maria Navaro 890-9402	GT 0050	12	TRS.	9/29/2012
La Huerta	1500 E.Main	Russellville,Ar. 72801-5327	Robert cell: 747-2105	GT 0036	3	TRS	10/17/2012
La Huerta (Mathias Shopping)	2005 N.Arkansas	Ste.1 Russellville,Ar. 72802-2214	880-9111 (1000gals)	GT 0058	3	TRS	10/17/2012
Latino Market	517 S.Arkansas Ave.		Jose 967-4188/4288	GT 0160	12		12/4/2012
La Villa Italian	1312 N.Arkansas	479) 968-6285	Ray Perolli	GT 0003	6	TRS.	12/27/2012
Las Palmas II	615 N Arkansas	Russellville,Ar. 72801-3845 886-2807	Jaime Atilano D.B.A.	GT 0013	3	TRS	12/27/2012

R-GREASE TRAP - FACILITY LIST

Customer	Address	Billing Address	Contact	Serial #		Pumper	Date Pumped
Legacy Heights Nursing	900 W.12th St.	Russellville,Ar. 72801-6699	Rebecca Brashear 968-5858	GT 0065	1	Murdock	12/3/2012
Linh Vietnames Noodle Soup	624 S.Knoxville	Russellville,Ar. 72801-6419	Phuong Linh Phan 479/ 221-0392	GT 0126	6	TRS	9/14/2012
Little Caesars	407 N.Arkansas	Ste.14 7500 Landers Rd., North Little Rock, AR 72117-1609	Robin Rohloff 501/833-9444	GT 0067	6	Roto-Rooter	8/27/2012
Long John Silvers	916 N.Arkansas	Rsvl. 72801	968-6040 (Charale)	GT 0004	3	Brooks	10/19/2012
Madame Wu's	914 S.Arkansas	Russellville,Ar. 72801-6012	968-4569	GT 0018	2	TRS	12/4/2012
Main Street Donuts	3415 W.Main.St.	Rsvl.		GT 0119	3	TRS	8/11/2011
Main Street Mission	1110 E.2st.	Jeff Jones	968-8303	GT 0033	12		10/27/2012
Market 311	311 S.Arkansas Ave.	Talkington Trust		GT 0181	6	Murdock	11/8/2011
McAlister Deli	319 Weir Rd.	1000 gal.new grease trap 7/1/2010		GT 0046	6	new trap	8/29/2012
McDonald's	81 SR 331N	808 W .B.St Rsvl. 72801-3610	Vicky Sykes 967-9393	GT 0041	6	Roto-Rooter	7/13/2012
McDonald's	1122 N.Arkansas	808 W .B.St Rsvl. 72801-3610	Bradley Allen 968-2292	GT 0002	6	Roto-rooter	7/13/2012
MiChild Ruvl.(Friendship)	1301 Russell Rd.	P.O.Box 2109 Rsvl. 72811-2109	Sam Kreun 264-0511	GT 0063	3	TRS	10/31/2012
Miller Suzan	2725 E. Parkway Ave.	Special Stainless Steel GT.		GT 0185			
Mulan's	2790 E. Parkway	Russellville,Ar. 72802-2006	Jim Ni 880-8080	GT 0107	3	TRS	12/27/2012
Neighborhood Roofing	1122 Bradley Ln.	owner Jeff Hawkins 479/ 967-8768		GT-0176		inactive	
New China(MathiasShopping)	2005 N.Arkansas	203 E.Elm St.Rsvl. 72802-8913	Andy Zhang 968-8881	GT 0108	3	TRS	10/31/2012
New Prospect Baptist Church	321 S.Houston Pl.	P.O.Box 2021 Rsvl. 72811-2021	Andy Hatley 970-8315	GT 0020	12	TRS	3/2/2012
Oak Tree Bistro&Cofee Shop	1019 N.Arkansas	P.O.Box 9253 Rsvl. 72811-9253	Ms.Tommie Harms 747/9940	GT 0109	12	TRS	2/6/2012
Old South	1330 E.Main	Russellville,Ar. 72801-5323	James Austin 968-3789	GT 0035	1	TRS	12/29/2012
Oumami	1107 N.Arkansas	Russellville,Ar. 72801-2937	Johny 857-3464	GT 0009	12	Murdock	6/4/2012
Oumami	304 N.Elmira Ave.	Rsvl. 72811	Amy 857-3464	GT 0111	12	TRS	8/2/2012
Outdoor Living Center RV.	10 Outdoor Ct.		Ricky 968-7705	GT 0141	12	Murdock	2/16/2012

R-GREASE TRAP - FACILITY LIST

Customer	Address	Billing Address	Contact	Serial #		Pumper	Date Pumped
P.D.Q. East	2215 E.Main	Frank Griffin Oil PO Box 666 Rsvl. 72811	Sherrie Leavell 968-3939	GT 0112	3	Roto-Rooter	11/13/2012
P.D.Q.South	2750 S Arkansas	P.O.Box 666 Rsvl. 72801	Tammy Brook 890-5392	GT 0113	12	TRS	4/2/2012
Ozark Pizza (Papa John)	700 W.Main	Ark. Pizza Grp. Angie 858-7272 700 Northshore Pl. N.L.R 72118-5298	inside grease trap Roto Rooter	GT 0114	12	Roto-Rooter	7/31/2012
Papa Murphy's	420 N.Arkansas Ave.	Rusl. Ar. 72801 968-7272		GT 0007	12	TRS.	9/5/2012
Patti Cakes	411 W Parkway	Russellville,Ar. 72801	Patti	GT 0115	12	TRS.	5/9/2011
Phillips Super Stop	1600 S.Elmira	Russellville,Ar. 72802-8452	968-2230	GT 0093	12	Roto-Rooter	2/5/2012
Pilot Travel (Sand/Oil Sep.)	215 SR.331 N.	P.O.Box 182181,Columbus,Oh.43218	Keith Putnam 967-7414	GT 0160	6	Tenn.General Const	10/29/2012
Pizza Hut	502 N.Arkansas	330 E.Madison Ave.Ste. B-10, Derby, KS. 67037	Nancy Pitt 479/890-5555	GT 0117	12	TRS	2/6/2012
Pizza Pro (1000 gal's)	218 E.Parkway	P.O.Box 1285 Cabot,Ar.72023-1285	Diane 1-800) 777-7554	GT0008	6	Murdock	12/18/2012
Pope County Detention Center	3 Emergency Ln.	Russellville,Ar. 72801	Kenneth Wells 968-2558	GT 0047	6	Roto-Rooter	7/10/2012
Popeyes Chicken (Pollo LLC)	2411 E.Parkway	Russellville,Ar. 72802	Steve Duvall 479/857-5573	GT 0068	3	Value Stream	10/27/2012
Prism Hospitality	2407 N.Arkansas	Noble Properties of Ark., Russellville, AR 72802-2230	Christy Millsaps 968-4300	GT 0052	3	TRS	12/21/2012
Pudgy Pig Bar-B-Que	2405 E.Parkway	Russellville,Ar. 72802 967-7748 store	Falwell Char Jr. 967-6062	GT 0044	6	Brooks	7/10/2012
Pupuseria Xiomara	416 S.Knoxville	Rsvl. Ar. Behind bldg.in the grass (750gls)	970/5430	GT 0001	12	TRS.	2/7/2012
Quick Truck Wash (nis)	43 Interstate Ave.	Rsvl.72802	Ida Jackson 968-9131	GT 0152	3	Reed's	7/19/2012
Quiznos	407 N.Arkansas	Ste.3 P.O.Box 814 Rsvl.72811-0814	Robert Ford 479/970-9388	GT 0072	12	new trap	11/28/2012
Ruby Tuesday	115 E Harrell Dr.	150 W. Church Ave.Maryville,Tn.37801	858-7151	GT 0073	3	TRS	9/29/2012
Rsvl. Centervalley School	1204 SR. 124	Jaime Thomas 968-1306	Kelly 968-1650	GT 0151	12	TRS.	3/2/2011
Rsvl. Child Development	507 N. Elmira Ave.	2707 E. H.St.Rsvl, 728	Sandra Johnson 567-5629	GT 0045	12	Murdock	3/16/2012
Rsvl. High School	2203 S.Knoxville Ave.	Jaime Thomas 968-1306		GT 0039	6	TRS.	8/16/2012
Rsvl. Junior High	2000 W.Parkway Dr.	P.O.Box 928 Rsvl. Ar.	Jaime Thomas 968-1306	GT 0075	6	TRS.	8/16/2012
Rsvl. Middle School	1201 W 4 th.St.	P.O.Box 928 Jaime Thomas 968-1306	Wesley Roach 968-1650	GT 0076	6	TRS	9/27/2012

R-GREASE TRAP FACILITY LIST

Customer	Address	Billing Address	Contact	Serial #		Pumper	Date Pumped
Rsvl. Nursing Rehab.	215 S.Portland	P.O.Box 1588 Rsvl. 72811-1588	Bro Price 968-5256	GT 0078	3	TRS	11/23/2012
Rsvl Nursing (ATU)	1700 W.C St.			GT 0077	0	Inactive	Inactive
Rsvl. Country Club	186 Country Club Plz.	P.O.Box 1143 Rsvl. 72811-1143	Tanya acct.pay. 968-1139 ext.4	GT 0079	3	Roto-Rooter	8/25/2011
Ryans Steakhouse	107 N.EIMira Ave.	Russellville,Ar. 72802		GT 0080	6	CLOSE	
S&F Fuel	1103 E. 16th St.	P.O.Box 267 Rsvl. 72811-0267	Ali 967-2676	GT 0031	12	Roto-Rooter	4/16/2011
Second Time Around	713 E.4th.St.	Used appliances	.890-8045	GT 0082	0	Inactive	Inactive
Senior Center(Friendship)	1010 N.Rochester	Rsvl.Ar. 72801 968-5039	Sam Kreun 264-0511	GT 0083	3	TRS.	12/21/2012
Shipleys Donuts	407 N.Arkansas	1000 gals. Caetra Yok 880-0885		GT 0179	6	TRS	7/17/2012
Sue Wee 2	422 S.Arkansas	Russellville,Ar.72801-5902	968-6802 Sue Meadows	GT 0019	12	TRS	6/4/2012
Sonic	3003 E.Parkway	3003 E.Parkway Rsvl.72802-2004	Ken Bilyeu 968-8631	GT 0084	12	TRS	4/5/2012
Sonic	806 E.4th.St	2505 W.Main Rsvl. 72801-2532	Ken Bilyeu 968-8631	GT 0085	12	TRS.	7/1/2012
Sonic	2505 W.Main St.	2505 W.Main Rsvl. 72801-2532	Ken Bilyeu 968-8631	GT 0086	12	TRS	4/5/2012
Sportsworld	3700 W.Main	Russellville,Ar. 72802	David Hyde 968-1122	GT 0088	12	Murdock	3/28/2012
St.Mary Hospital	1800 W.Main St.	P.O.Box 3050 Rsvl. 72811-3050	Craig Neal 964-9269	GT 0089	6	Roto-Rooter	12/24/2012
Starbucks	2220 E Parkway	mcatudal@starbuck.com (Micheal)	Heather Hall 967-2488	GT 0090	3	Murdock	12/20/2012
Stella Manor	400 N.Vancouver	Russellville,Ar. 72801-2720	Brad 968-4141	GT 0091	12	Murdock	2/22/2012
Subway's	2410 E.Parkway	56 Bowers Loop,Dover,Ar.72837-8777	Melisa Cross 968-7976	GT 0092	12	Roto-Rooter	7/25/2012
Subway's (Pilot Travel Center)	215 SR.331 N.	P.O.Box 182181,Columbus,Oh.43218	Keith Putnam 967-7414	GT 0160	6	Tenn.General Const	2/22/2011
Suds Car Wash	1020 N.Arkansas Ave.	Signature Bank of Arkansas	John Krochcke 964-9887	GT 0179	6	Murdock	10/25/2012
Superfast Lube & Oil	1301 E. Main St.	Rsvl. Ar. 72801	Bobby Gipson 968-8761	GT 0148	12	Roto Rooter	1/26/2012
Taco Bell # 346	301 N.EIMira Ave.	P.O.Box 6538 Ft.Smith 72906-6538	967-2121 Christa	GT 0094	6	Drain Master	9/14/2012
Taco Bell. # 345	1308 N.Arkansas Ave.	Rsvl. 72801 968-7444	Chris Gosh 479/806-3894	GT 0095	6	Drain Master	9/14/2012

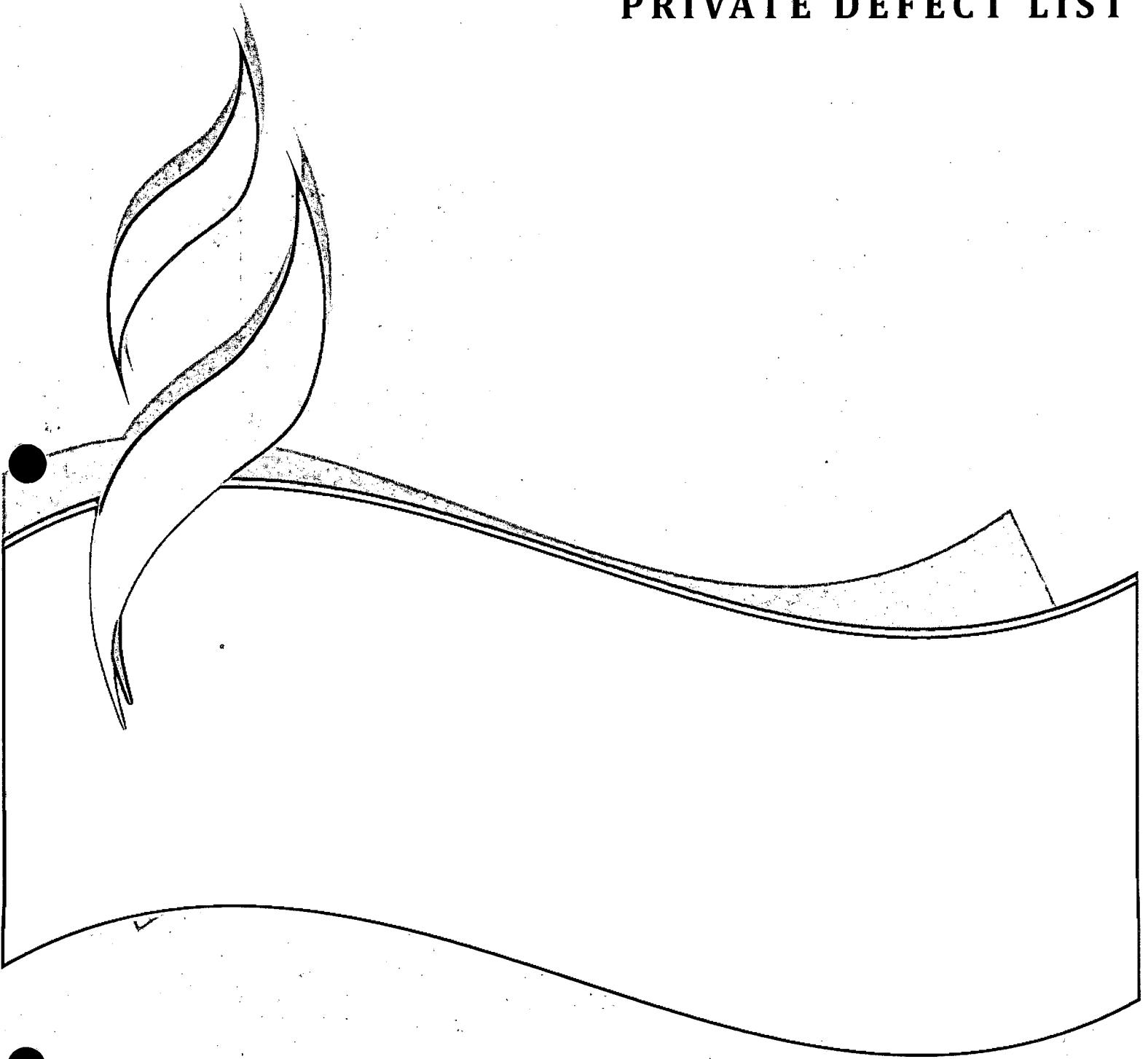
R-GREASE TRAP - FACILITY LIST

Customer	Address	Billing Address	Contact	Serial #		Pumper	Date Pumped
Taco Bueno # 8011.	331 Weir Rd.	Quality Brand Mgt.611 S.Elm Pl., Broken Arrow, OK 74012 (Danie)	967-3111(918)-251-7060Shanda	GT 0096	0		close
Taco John's	1103 N.Arkansas	Russellville,Ar. 72801-2937	Jerome Minaham DBA 967-1985	GT 0097	12	Murdock	5/16/2012
Taco John's	1819 E.Main St.	Rsvl.72802	(1000 gal's)	GT 0098	12	new trap	5/13/2011
Taco Villa	420 E.4th.St.	Russellville,Ar. 72801-5219	Kit Kitterman DBA. 968-1191	GT 0099	3	Murdock	10/30/2012
Three Guy's Inc.(groceries)	3301 W. Main St.	Rsvl.	Jessie Emerson 967-4466	GT 0064	12	Williams	8/11/2011
Tyson (TVDC)	4820 E.Main	Rsvl. Ar. 72801	Mark Johnson 964-8124	GT0166.	12	Roto-Rooter	6/27/2011
Tyson Truck Shop	5050 E.Main	ronnie.keene@tyson.com 964-8160	Crystal Clean 877/ 938-7948	GT 0183	6	Crytal Clean	12/5/2012
Varizon Phone(Mr.Burger)	1710 E.Main	Not in use	formerly Mr.Burger not in use	GT 0102	0	Inactive	Inactive
Venezia's Pizzeria &Pasta	1321 E.Main St.			GT 0051	6	On Site Portable's	11/13/2012
Waffle House #1410	3085 E.Parkway	Ozark Waffles llc.P.O.Box 6450, Norcross, GA. 30091 Melony for both stores	Michelle Harness 1-866/327-4362, Local 968-3382	GT 0042	3	Value Stream	1/2/2013
Waffle House # 897	2408 N.Arkansas	5305 McClanaham Dr. Ste.1, North Little Rock, AR 72116-7001	1-866/327-4362, Local-968-3444 Crystal	GT 0103	3	Value Stream	10/3/2012
Wal-Mart (2 ea.grease traps)	2409 E. Main	P.O.Box 8042 Bentonville,Ar.72712-8042	Roxanne Wolf 967-9777	GT 0104	3	Liquid Enviromental	11/28/2012
2000 gal's West side	GT 0104	1000 gal's North side GT 0105		GT 0105	3	Liquid Enviromental	11/28/2012
Wal-Mart Oil Separator	1000 gal's	Wendy Widner 479/204-2030	Oil- Water Separator	GT 0106	6	Boomer Envi:	10/10/2012
Waste Mgmt. (nis)	88 Joyce Ln.	Sherry 968-0540	Oil-Separator	GT 0187	4	FCC	11/5/2012
Wendy's #45	215 SR.331 N.	42 Parkstone Cir.Norht Little Rock 72116	Corp. 501/ 372-2000	GT 0059	6	3-D Plumbing	12/21/2012
Wendy's # 10	721 N Arkansas	Fourjay llc.42 Parkstone Cir.N.Little Rock 72116-7086	Gary 857-1571	GT 0011	6	3-D Plumbing	11/12/2012
Western Sizzlin	1105 E.Main	3492 W.Sunset Ave.Springdale, AR 72762-4900	Joe 479/751-3663	GT 0118	3	TRS.	10/31/2012
West Main Donuts	3415 W.Main St.	Mark 880-9308		GT 0119	3	TRS	12/21/2012
West Side Church of Christ	201 N. Waco	Rsvl 72801 2300 W.C.St.	Frank 968-1121/6565	GT 0120	12	Murdock	2/9/2012
Wildflower Retirement	240 S.Inglewood	Emeritus Corp.3131 Elliott Ave.Ste.500	Roberta Gill 890-6709	GT 0121	3	TRS	11/23/2012

Yates Htg & A/C Inc. 1605 S.Elmira Ave. owner Robert Simpson 886-0102 Carl & Mary Yates 495-9741/40 GT-0177 0 Inactive Inactive

APPENDIX S

PRIVATE DEFECT LIST



**Cleanout Cap Program
Infiltration Contributors List**

Order #	Service Address	Req Repair	Notice	Due Date	Contact	Inspection	Compliant	
1	419236	1019 E Gum St	cleanout assembly	9-Oct-08	3-Nov-08	20-Nov-08	21-Nov-08	Yes
2	419243	503 E Fir St	cleanout assembly	9-Oct-08	3-Nov-08	20-Nov-08	21-Nov-08	Yes
3	415222	601 E Fir St	service line	9-Oct-08	3-Nov-08	13-Oct-08	20-Oct-08	Yes
4	415236	612 Twin Oak Dr	cleanout assembly	9-Oct-08	3-Nov-08	13-Oct-08	28-Oct-08	Yes
5	421471	603 E Gum St	cleanout & service	9-Oct-08	3-Nov-08	17-Nov-08	22-Dec-08	Yes
6	415238	604 E Holly St	cleanout & service	9-Oct-08	3-Nov-08	14-Oct-08	20-Oct-08	Yes
7	415239	141 Sandstone Dr	service line	9-Oct-08	3-Nov-08	17-Oct-08	4-Nov-08	Yes
8	415240	30 Hamco Cir	cleanout assembly	9-Oct-08	3-Nov-08	13-Nov-08	14-Nov-08	Yes
9	415241	703 Shadow Dr	cleanout assembly	9-Oct-08	3-Nov-08	27-Oct-08	28-Oct-08	Yes
10	419245	32 Crystal Dr	cleanout assembly	9-Oct-08	3-Nov-08	none	20-Nov-08	Yes
11	415254	308 E Gum St	service line	9-Oct-08	3-Nov-08	22-Oct-08	13-Nov-08	Yes
12	415255	306 E Gum St	service line	9-Oct-08	3-Nov-08	20-Oct-08	24-Oct-08	Yes
13	415257	315 E Fir St	service line	9-Oct-08	3-Nov-08	30-Oct-08	30-Oct-08	Yes
14	422983	312 E Gum St	cleanout & service	9-Oct-08	6-Jan-09	16-Dec-08	6-Jan-09	Yes
15	415259	313 E Fir St	service line	9-Oct-08	3-Nov-08	10-Oct-08	20-Oct-08	Yes
16	415261	704 E Fir St	cleanout assembly	9-Oct-08	3-Nov-08	3-Nov-08	3-Nov-08	Yes
17	415262	3010 N Hartford Ave	cleanout assembly	9-Oct-08	3-Nov-08	13-Oct-08	14-Oct-08	Yes
18	423523	4100 W Main St	multiple/trailer park	15-Oct-08	19-Jan-09	13-Nov-08	12-Jan-09	Yes
19	418895	PO Box 570	multiple/trailer park	16-Oct-08	12-Nov-08	13-Nov-08	14-Nov-08	Yes
20	424534	3640 E Main St	multiple/trailer park	16-Oct-08	19-Jan-09	18-Nov-08	20-Jan-09	Yes
21	417488	2615 W Main St	multiple/trailer park	16-Oct-08	14-Nov-08	24-Oct-08	27-Oct-08	Yes
22	417486	312 E Fir St	service line	24-Oct-08	24-Nov-08	27-Oct-08	28-Oct-08	Yes
23	420827	1302 E M St	cleanout assembly	30-Oct-08	28-Nov-08	8-Dec-08	9-Dec-08	Yes
24	422091	3318 E 4th St	cleanout assembly	17-Nov-08	17-Dec-08	17-Dec-08	22-Dec-08	Yes
25	421474	3406 E 4th St	cleanout assembly	17-Nov-08	17-Dec-08	19-Nov-08	17-Dec-08	Yes
26	421475	406 Union Ave	cleanout assembly	17-Nov-08	17-Dec-08	17-Dec-08	18-Dec-08	Yes
27		Shiloh Creek Apt 10	cleanout assembly	17-Nov-08	17-Dec-08	19-Nov-08	15-Dec-08	Yes
28	421477	31 Northview Dr	cleanout assembly	17-Nov-08	17-Dec-08	19-Dec-08	29-Dec-08	Yes
29	420818	502 E Gum St	cleanout assembly	18-Nov-08	18-Dec-08	8-Dec-08	9-Dec-08	Yes
30	421552	3505 E 5th St	cleanout assembly	18-Nov-08	18-Dec-08	17-Dec-08	18-Dec-08	Yes
31	418192	3510 E 4th St	cleanout assembly	18-Nov-08	18-Dec-08	19-Nov-08	10-Nov-08	Yes
32	420836	518 S Jackson Ave	cleanout assembly	18-Nov-08	18-Dec-08	28-Nov-08	9-Dec-08	Yes
33	421553	1209 S Hartford Ave	service line	18-Nov-08	18-Dec-08	none	18-Dec-08	Yes
34	421554	901 S Ithaca Ave	open cleanout w/tape	26-Nov-08	18-Dec-08	none	18-Dec-08	Yes
35	121556	1005 S Hartford Ave	cleanout assembly	26-Nov-08	18-Dec-08	none	18-Dec-08	Yes
36	421557	900 S Hartford Ave	service line	26-Nov-08	18-Dec-08	none	18-Dec-08	Yes

**Cleanout Cap Program
Infiltration Contributors List**

Order #	Service Address	Req Repair	Notice	Due Date	Contact	Inspection	Compliant	
37	423508	708 E 4th St	service line	19-Dec-08	19-Jan-09	9-Jan-09	9-Jan-09	Yes
38	421559	901 S Greenwich Ave	cleanout assembly	26-Nov-08	19-Dec-08	19-Dec-08	19-Dec-08	Yes
39	421561	813 S Greenwich Ave	cleanout assembly	26-Nov-08	19-Dec-08	19-Dec-08	19-Dec-08	Yes
40	421562	412 S Greenwich Ave	cleanout assembly	26-Nov-08	19-Dec-08	none	19-Dec-08	Yes
41	421525	1708 S Cleveland Ave	cleanout assembly	26-Nov-08	22-Dec-08	15-Dec-08	17-Dec-08	Yes
42	421206	305 E 17th St	cleanout assembly	26-Nov-08	22-Dec-08	8-Dec-08	11-Dec-08	Yes
43	421790	301 E 17th St	cleanout assembly	26-Nov-08	22-Dec-08	22-Dec-08	23-Dec-08	Yes
44	421791	1002 E 23rd St	cleanout assembly	9-Dec-08	31-Dec-08	23-Dec-08	31-Dec-08	Yes
45	421792	2218 S Frankfort Ave	cleanout assembly	9-Dec-08	31-Dec-08	23-Dec-08	31-Dec-08	Yes
46	428411	1313 S Sidney Ave	cleanout assembly	18-Feb-09	19-Mar-09	none	19-Mar-09	Yes
47	428412	1502 E 13th St	cleanout assembly	18-Feb-09	19-Mar-09	none	19-Mar-09	Yes
48	428408	1504 E 13th St	cleanout assembly	19-Feb-09	19-Mar-09	24-Feb-09	25-Feb-09	Yes
49	428924	911 E F St	cleanout assembly	ph 24-Feb-09	26-Mar-09	24-Feb-09	9-Mar-09	Yes
50	428926	511 N Hartford Ave	cleanout assembly	24-Feb-09	26-Mar-09	none	26-Mar-09	Yes
51	428934	718 N Frankfort Ave	cleanout & service	27-Feb-09	30-Mar-09	4-Mar-09	5-Mar-09	Yes
52	430057	1120 N Erie Ave	cleanout assembly	3-Mar-09	1-Apr-09	17-Mar-09	19-Mar-09	Yes
53	430058	615 E E St	service line	3-Mar-09	1-Apr-09	25-Mar-09	25-Mar-09	Yes
54	430059	509 N Erie Ave	cleanout assembly	4-Mar-09	2-Apr-09	26-Mar-09	27-Mar-09	Yes
55	430165	605 N Erie Ave	service line	13-Mar-09	2-Apr-09	no cust	2-Apr-09	Yes
56	430168	317 E F St	cleanout assembly	13-Mar-09	2-Apr-09	no cust	2-Apr-09	Yes
57	432045	234 E K St	cleanout assembly	4-Mar-09	2-Apr-09	18-Mar-09	8-Apr-09	Yes
58	430068	506 N Arkansas Ave	cleanout assembly	9-Mar-09	6-Apr-09	14-Mar-09	13-Apr-09	Yes
59	430055	1300 N Boston Ave	service line	10-Mar-09	8-Apr-09	12-Mar-09	10-Apr-09	Yes
60	430125	112 E E St	service line	10-Mar-09	8-Apr-09	6-Apr-09	7-Apr-09	Yes
61	430124	208 E J St	service line	10-Mar-09	8-Apr-09	17-Mar-09	18-Mar-09	Yes
62	430120	405 S Arkansas Ave	service line	10-Mar-09	16-Mar-09	12-Mar-09	17-Mar-09	Yes
63	430418	209 N Hartford Ave	cleanout assembly	17-Mar-09	16-Apr-09	14-Apr-09	14-Apr-09	Yes
64	430420	421 E C St Apt B	cleanout assembly	17-Mar-09	16-Apr-09	14-Apr-09	14-Apr-09	Yes
65	431965	2415 W 8TH St	cleanout & service	6-Apr-09	6-May-09	14-Apr-09	14-Apr-09	Yes
66	441150	318 S Houston Ave	service line	21-Jul-09	19-Aug-09	20-Jul-09	19-Aug-09	Yes
67	443159	312 E Fir St	service line	21-Jul-09	20-Aug-09	26-Aug-09	20-Aug-09	Yes
68	443930	409 S Denver Ave	cleanout/service	21-Aug-09	21-Sep-09	2-Sep-09	21-Sep-09	Yes
69	444944	609 S Denver Ave	cleanout/service	21-Aug-09	21-Sep-09	25-Sep-09	21-Sep-09	Yes
70	443932	1910 S ElPaso, Apt1	service line	4-Sep-09	12-Oct-09	9-Oct-09	5-Oct-09	Yes
71	445031	401 W 15th, Apt 1,2,3	cleanout assembly	15-Sep-09	15-Oct-09	15-Sep-09	29-Sep-09	Yes
72	452595	506 N Inglewood, Apt 3	cleanout assembly	5-Jan-10	4-Feb-10	28-Jan-10	4-Feb-10	Yes

**Cleanout Cap Program
Infiltration Contributors List**

Order #	Service Address	Req Repair	Notice	Due Date	Contact	Inspection	Compliant	
73	452596	506 N Inglewood, Apt 4	cleanout assembly	5-Jan-10	4-Feb-10	28-Jan-10	4-Feb-10	Yes
74	452597	510 N Inglewood, Apt 3	cleanout assembly	5-Jan-10	4-Feb-10	28-Jan-10	4-Feb-10	Yes
75	452598	510 N Inglewood, Apt 4	cleanout assembly	5-Jan-10	4-Feb-10	28-Jan-10	4-Feb-10	Yes
76	451025	308 N Inglewood, Apt 3&4	cleanout assembly	5-Jan-10	4-Feb-10	7-Jan-10	7-Jan-10	Yes
77	467397	1820 S Commerce Ave	service line	4-Aug-10	3-Sep-10	6-Aug-10	13-Aug-10	Yes
78	467033	1910 S ElPaso	cleanout assembly	4-Aug-10	3-Sep-10	29-Jul-10	9-Aug-10	Yes
79	469639	100 W 19th St	cleanout assembly	4-Aug-10	3-Sep-10	8-Sep-10	9-Sep-10	Yes
80	467387	1301 S Denver Ave	cleanout assembly	4-Aug-10	3-Sep-10	12-Aug-10	13-Aug-10	Yes
81	465374	706 W 18th Terrace	cleanout assembly	30-Jul-10	13-Aug-10	31-Jul-10	27-Aug-10	Yes
82	469327	1113 S Oswego Ave	cleanout assembly	9-Aug-10	8-Sep-10	8-Sep-10	15-Sep-10	Yes
83	470583	1207 E 13th St	service line	24-Aug-10	23-Sep-10	22-Sep-10	23-Sep-10	Yes
84	468384	1519 E 14th St	service line	24-Aug-10	23-Sep-10	1-Sep-10	2-Sep-10	Yes
85	470699	1508 E 13th St	cleanout assembly	24-Aug-10	23-Sep-10	none	24-Sep-10	Yes
86	471710	POM Inc	cleanout/service	7-Sep-10	7-Oct-10	11-Oct-10	11-Oct-10	Yes
87	471801	Skate Station	cleanout assembly	7-Sep-10	7-Oct-10	14-Oct-10	14-Oct-10	Yes
88	470335	105 S Rochester	cleanout assembly	8-Sep-10	8-Oct-10	17-Sep-10	20-Sep-10	Yes
89	471713	Brown's Catfish	illegal drain connect	15-Sep-10	15-Oct-10	17-Sep-10	20-Sep-10	Yes
90	472218	1202 S Detroit Ave	cleanout assembly	24-Sep-10	25-Oct-10	27-Oct-10	27-Oct-10	Yes
91	HUD Apts	1701 S Detroit Ave #51	cleanout assembly	24-Sep-10	25-Oct-10	27-Sep-10	20-Jun-12	Yes
92	472211	1104 S Detroit Ave	cleanout assembly	24-Sep-10	25-Oct-10	19-Oct-10	19-Oct-10	Yes
93	471487	1708 S Cleveland Ave	cleanout assembly	24-Sep-10	25-Oct-10	5-Oct-10	6-Oct-10	Yes
94	472222	203 E 14th St	cleanout assembly	24-Sep-10	25-Oct-10	none	25-Oct-10	Yes
95	472224	109 E 15th St	service line	24-Sep-10	25-Oct-10	21-Oct-10	21-Oct-10	Yes
96	472225	2205 S Hartford Cv	cleanout assembly	28-Sep-10	28-Oct-10	none	28-Oct-10	Yes
97	472226	906 E 23rd St	cleanout assembly	28-Sep-10	28-Oct-10	26-Oct-10	26-Oct-10	Yes
98	472227	1903 S Arkansas	cleanout assembly	28-Sep-10	28-Oct-10	21-Oct-10	21-Oct-10	Yes
99	472228	918 E 23rd St	cleanout assembly	28-Sep-10	28-Oct-28	28-Oct-10	29-Oct-10	Yes
100	472229	818 E 23rd St	service line	28-Sep-10	28-Oct-10	none	28-Oct-10	Yes
101	496558	1016 N Jackson Ave	cleanout cap	28-Sep-11	28-Oct-11	none	28-Oct-11	Yes
102	496542	705 East M St	cleanout assembly	28-Sep-11	28-Oct-11	3-Oct-11	29-Oct-11	Yes
103	496562	400 East H St	cleanout/service	28-Sep-11	28-Oct-11	none	28-Oct-11	No
104	496561	803 East K Pl	cleanout assembly	28-Sep-11	11-Nov-11	28-Oct-11	9-Nov-11	Yes
105	496560	707 East L St	cleanout assembly	28-Sep-11	28-Nov-11	28-Oct-11	9-Nov-11	Yes
106		1020 Parker Rd	service line	29-Sep-11	29-Oct-11	15-Dec-11	15-Dec-11	Yes
107	496564	605 N Erie Ave	service line	29-Sep-11	29-Oct-11	none	31-Oct-11	No
108	496563	618 East H St	cleanout assembly	29-Sep-11	29-Oct-11	none	31-Oct-11	??

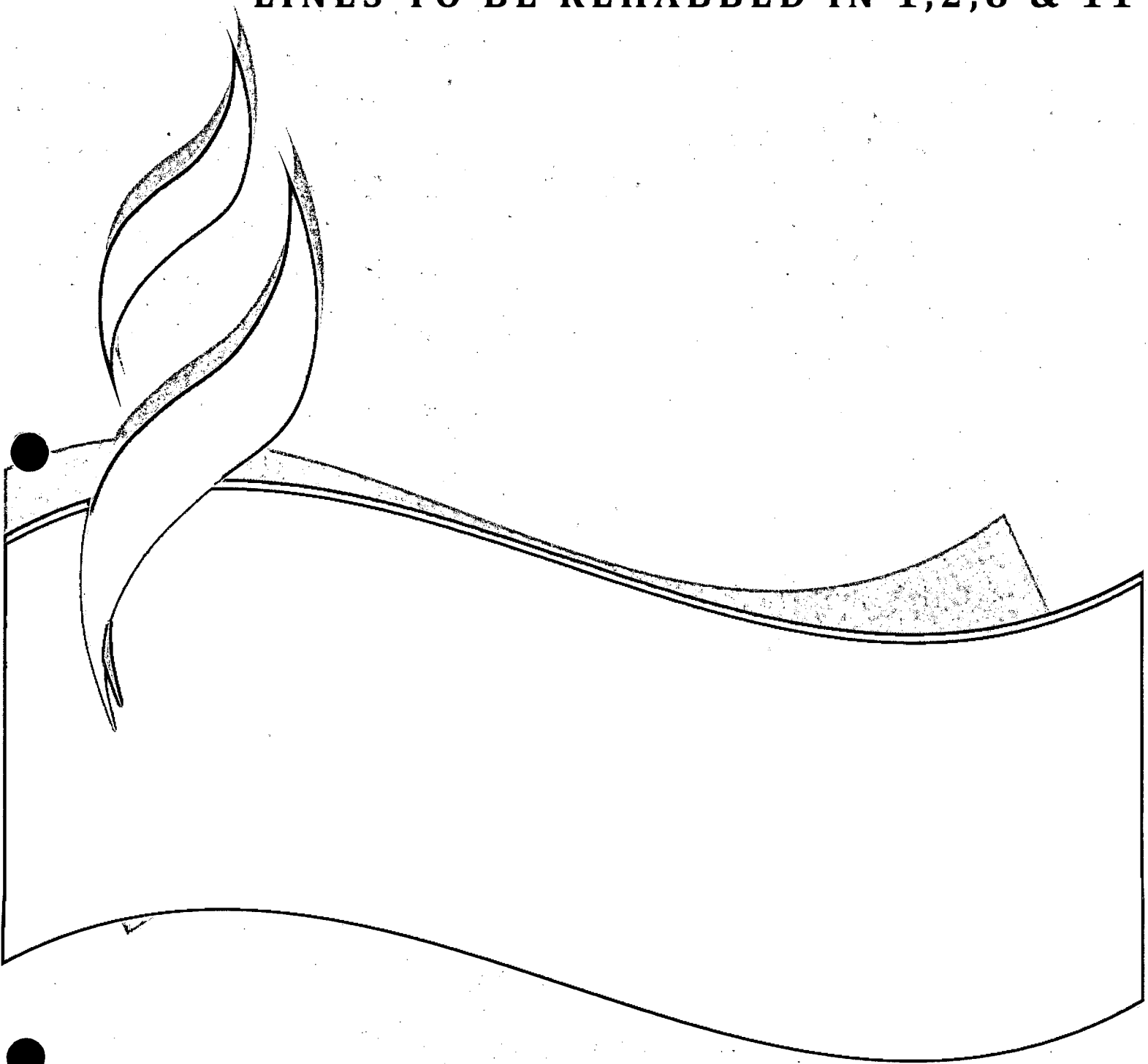
**Cleanout Cap Program
Infiltration Contributors List**

Order #	Service Address	Req Repair	Notice	Due Date	Contact	Inspection	Compliant
109	509250 222 East J St	cleanout assembly	9-May-12	9-May-12	9-May-12	10-May-12	Yes
110	496601 1804 S Baltimore Ave	cleanout cap			17-Oct-11	21-Oct-11	Yes
111	496602 1800 S Columbus Ave	cleanout cap			19-Oct-11	21-Oct-11	Yes
112	496890 3506 E 4th St	service line			26-Oct-11	26-Oct-11	Yes
113	913 W Norristown Cir	cleanout cap					No
114	255 Hilltop Dr	cleanout cap					No
115	805 W 14th St	cleanout assembly					No
	1418 Normandy Cir	cleanout cap					No
	531 Old Post Rd	cleanout assembly					No
	1406 Shalimar Cir	cleanout assembly					No

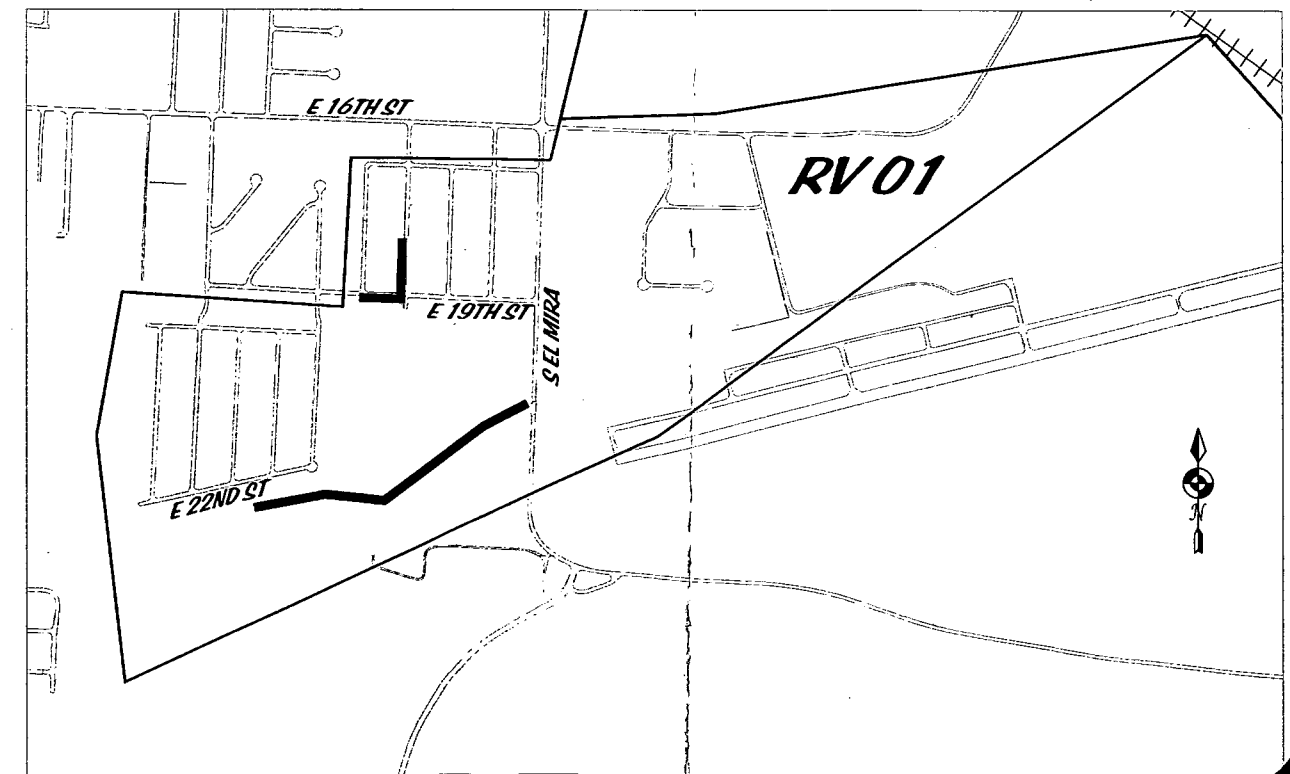
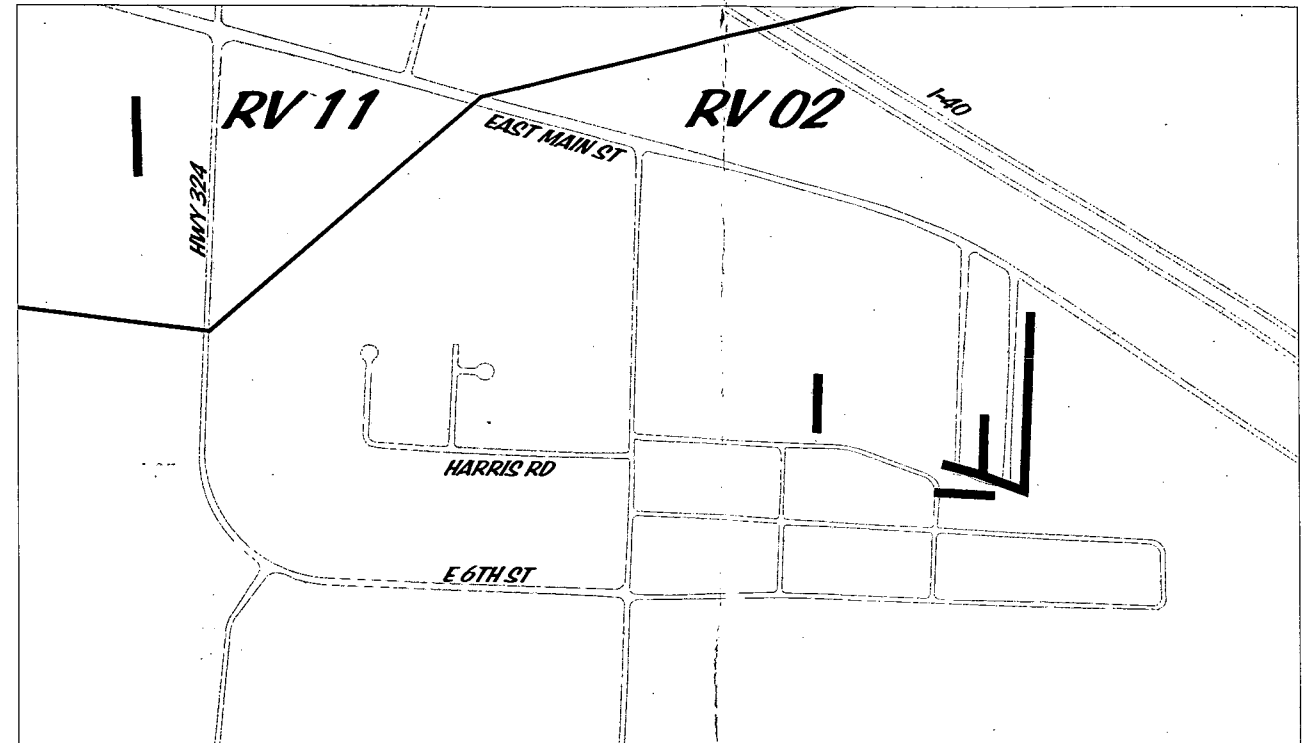
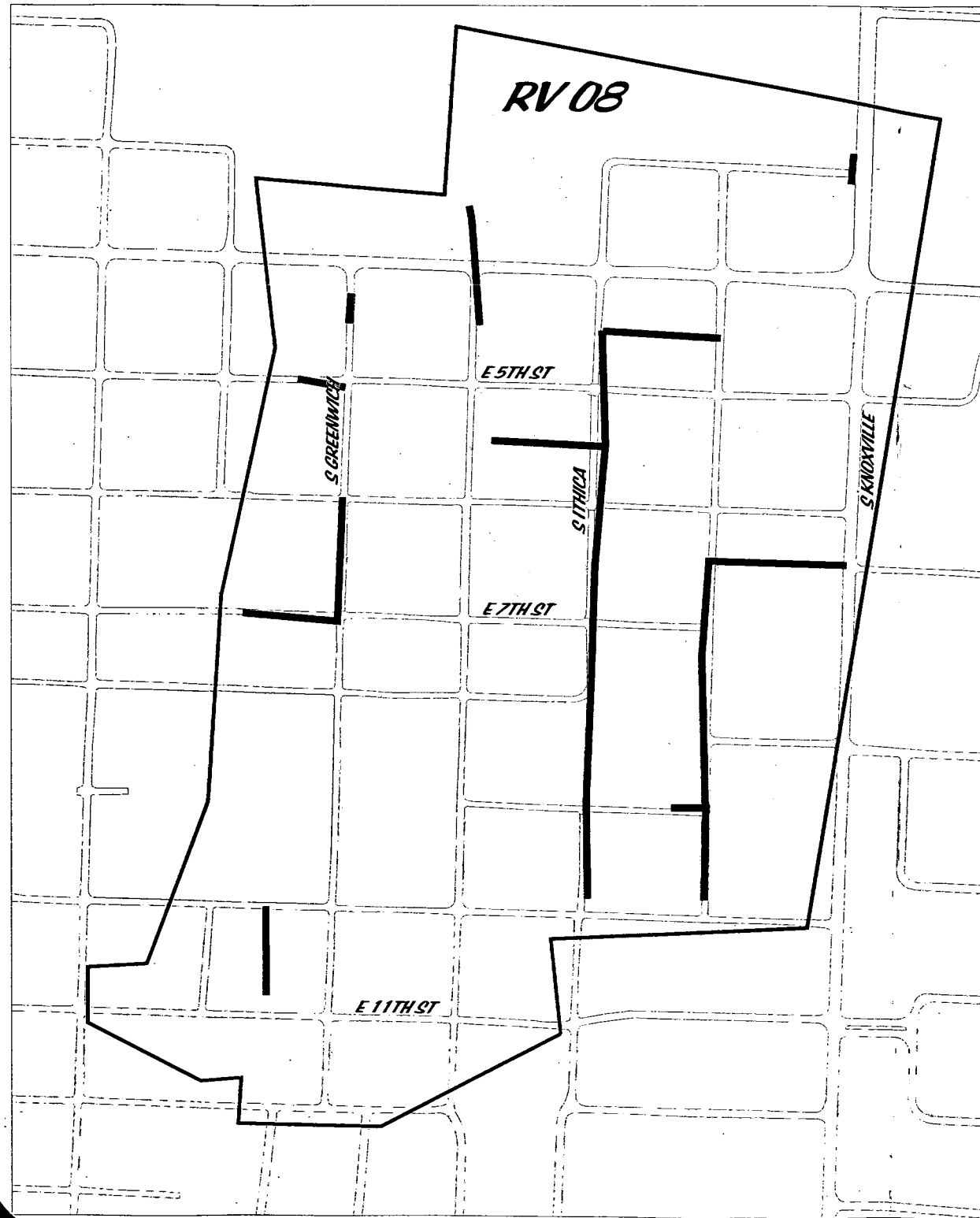
 Compliant
 Pending
 NonComp

APPENDIX T

LINES TO BE REHABBED IN 1,2,8 & 11

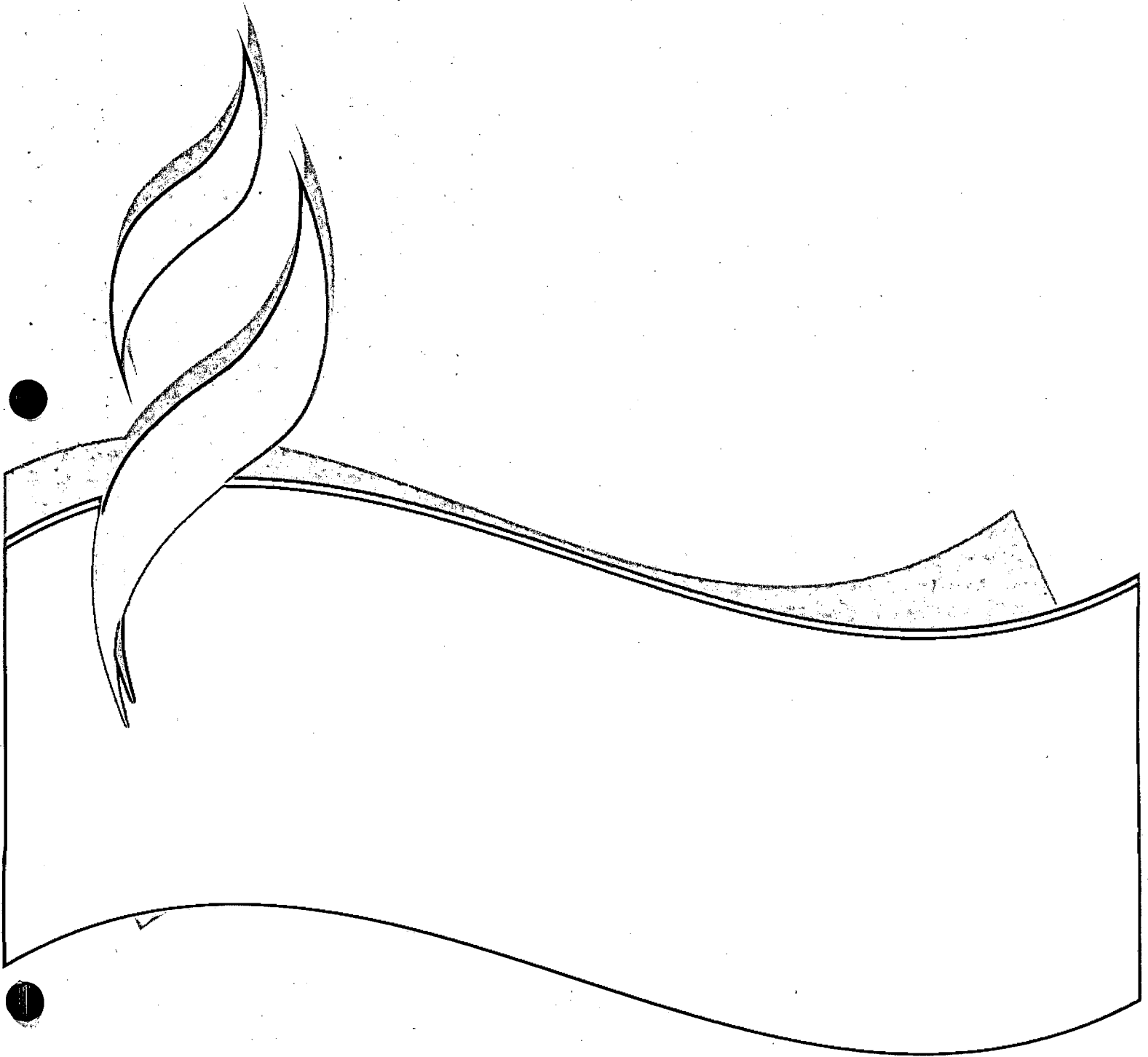


APPENDIX T - 1.2.8 & 11 LINES TO BE REHABBED



APPENDIX U

STANDARD SPECIFICATIONS AND DETAILS



STANDARD CONDITIONS OF APPROVAL OF
ENGINEERING PLANS FOR PROPOSED WATER
OR SEWER MAIN EXTENSIONS
NOVEMBER 2002

All plans for proposed extensions of the water distribution system, sewage collection system or appurtenances to either system shall be prepared by and bear the stamp of a Professional Engineer currently registered by the *Arkansas State Board of Registration for Professional Engineers and Land Surveyors* and shall conform to the latest edition of the "City Corporation Standard Specifications and Details and Policies and Procedures for the Extension of the Water and Wastewater Facilities".

City Corporation's approval of a plan for a particular water and/or sewer main extension or appurtenances to either system is contingent on several standard conditions.

1. The engineer of record must also submit the same plan to the Arkansas Department of Health and to any other agencies or local entities for approval. City Corporation does not submit proposed plans to regulatory agencies or local entities for approval.
2. No construction is permitted on the proposed water and/or sewer main extension or appurtenances to either system until City Corporation, the regulatory agencies and all local entities have approved the proposed plans in writing. In addition, approval of the Russellville City Council is required for any proposed service outside of the City limits.
3. Approval of proposed plans for water and/or sewer main extensions or appurtenances to either system by City Corporation is subject to the condition that all materials, construction procedures and tests are to be as specified in the latest edition of the City Corporation Standard Specifications. The only deviations from published City Corporation Standards, which are permitted, are those which are specifically approved in writing by City Corporation for the particular water and/or sewer main extension or appurtenances to either system proposed. City Corporation inspectors do not have the authority to waive or modify City Corporation standards in the field.
4. When City Corporation approves plans for water and/or sewer main extensions or appurtenances to either system, the approval process does not stop with the plan approval. The City Corporation approval is with the express understanding that the engineer of record will remain responsible for the construction as shown on the approved plans, until all work is complete and the project has been "Accepted for Service" by City Corporation.
5. The engineer of record for an approved water and/or sewer main extension or appurtenances to either system is responsible for advising City Corporation when

construction is to begin on the proposed water or sewer main extensions. Please provide a minimum of 24 hours notice of commencement of construction. If construction is to be performed on a weekend, holiday or after normal working hours (8:00 a.m. to 4:30 p.m.), make arrangements in advance for a City Corporation inspector to be present.

6. No permits for water meters or sewer taps will be issued for main extensions or appurtenances, which have not been "Accepted for Service" by City Corporation. "Accepted for Service" is defined as follows:
 - a. All construction and cleanup is complete and all test have been passed with the documentation in City Corporation files.
 - b. As-builts have been received by City Corporation and have been field checked and found acceptable.
 - c. All appropriate agreements have been executed and filed with City Corporation. All applicable pro-rata rebates have been collected as appropriate.
 - d. Easements and/or street dedications have been filed for record in the Courthouse and copies furnished to City Corporation.
 - e. City Corporation has by letter accepted the main extension or appurtenances for service and maintenance, subject only to the one-year's maintenance period.

PART M - MATERIALS

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M6 - PAVEMENT REPAIRS	SM-8
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PART C - CONSTRUCTION METHODS

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M1 - DESCRIPTION

General

This part of the specifications shall govern for all materials used in the construction of sanitary sewerage facilities under the jurisdiction of City Corporation. Projects that would necessarily involve materials other than those included in this specification shall be approved by City Corporation. Complete specifications covering all materials not included herein shall be submitted for approval. Any material proposed for use other than materials herein specified shall be of kind and type normally used in the construction of sewerage facilities and compatible with City Corporation's maintenance program and financial abilities.

M2 - SANITARY SEWER PIPE

Description

The different kinds of strengths of sewer pipe outlined in this section shall be used in the construction of sanitary sewer lines in accordance with methods specified in Section C - Construction Methods. The strength of pipe used shall be based upon standard engineering design procedures and manufacturer or trade association recommendations and approved by City Corporation. The strength proposed shall be shown on the drawings. All pipe shall be circular unless otherwise approved. Only pipe materials listed in this section shall be used for main extensions or building sewers unless specifically authorized in writing by City Corporation.

Concrete Sewer Pipe

Reinforced Pipe:

All concrete sewer pipe for main extensions shall be reinforced concrete pipe conforming to the requirements of current ASTM Designation C76. Additional requirements shall include permeability and hydrostatic tests in accordance with current ASTM Designation C497. Non-reinforced concrete pipe shall not be used for main extensions.

Clay Sewer Pipe

Not acceptable for sanitary sewer construction.

PVC or ABS Truss Pipe

Not acceptable for sanitary sewer construction.

Polyvinyl Chloride (PVC) Sewer Pipe

Gravity Sewers:

PVC pipe for sanitary sewer gravity mains in 6" and larger sizes shall conform to the current ASTM designation D-3034, PVC gravity sewer pipe SDR-26. Service laterals from the main to the property line shall be PVC gravity sewer pipe SDR-26, unless specified otherwise.

Sewage Force Mains:

PVC Pipe for sanitary sewer force mains in 2" and 3" sizes shall conform to the current ASTM designation D-2241, PR 200 (SDR- 21). PVC pipe for force mains 4" and larger in diameter shall conform to ASTM D1785, SDR-18, AWWA C-900, Class 150 psi.

Cast Iron Pipe

Cast iron pipe shall meet the requirements of ASTM Designation A 74-66. Cast iron pipe shall not be used for sewer lines other than service lines and then when specified by an engineer. Pipe shall be made with bell and spigot gasketed joints as specified in this section. "No Hub" cast iron pipe is specifically forbidden for buried installation.

Ductile Iron Pipe

Gravity Sewers:

Ductile iron pipe shall conform to ANSI/ASTM Standard A 746 (gravity sewer pipe) or ANSI Standard C150/A21.5. It shall be lined with cement mortar in accordance with ANSI Standard A21.4. Pipe shall be manufactured for use with the type joints specified.

Sewage Force Mains:

Ductile iron pipe shall conform to ANSI/AWWA C151/A21.51 thickness Class 50. It shall be lined with cement motor in accordance with ANSI Standard A21.4. Pipe shall be manufactured for use with the type joints specified.

Encasement Pipe

Steel encasement pipe shall be smooth wall, welded steel pipe or asphalt coated corrugated metal pipe of the size and wall thickness called for on the plans and approved by City Corporation. Steel pipe shall conform to the requirements of AASHTO Designation M-190 for Type C Coating. Corrugated metal pipe shall conform to the requirements of current AHTD specifications.

Wall thickness or gauge shall be as shown on the plans and as approved by City Corporation.

The annular space between the inside of the encasement pipe and the sewer pipe shall be as shown on the plans.

Pipe Joints

Concrete Pipe

Joints for concrete pipe shall be flexible gasket, bell and spigot type joint conforming to the requirements of ASTM Designation C 443-70 for pipe less than 24" in diameter and ASTM Designation C 361-70a for pipes having a diameter of 24" and over.

PVC Sewer Pipe

Joints shall be the rubber gasket push-on, conforming to the requirements of ASTM Designation D3139.

Cast Iron Soil Pipe

All joints shall be as shown on the plans and as specified herein.

All joints shall be rubber gasket push-on, mechanical, or flange to flange and shall conform to the requirements of ANSI Specification A 21.11.

Ductile Iron Pipe

All joints shall meet with the requirements for ductile iron pipe, as required by current manufacturers recommendations and be approved by City Corporation.

Encasement Pipe

All joints for smooth-wall steel encasement pipe shall be welded joints unless otherwise approved. Joints for corrugated metal pipe shall meet with the manufacturer's recommendation and be approved by City Corporation.

Pipe Fittings

Standard Fittings - Gravity Sewers:

All bends, tees, plugs, adaptors, wyes, or other fittings shall meet with the requirements of the type and kind of pipe used and all joints shall meet with the requirements for the joints listed above.

Standard Fittings - Force Mains:

All bends, tees, plugs, adaptors, reducers, wyes and other fittings shall be ductile iron mechanical joint conforming to ANSI/AWWA Standard C100/A21.10 and C111/A21.11.

Special Fittings:

All special fittings shall be in accordance with the pipe manufacturer's recommendations and as approved by City Corporation. Connections between different kinds of pipe and for future connections shall be detailed on the plans and shall be such as to provide watertight joints and connections and approved by City Corporation.

Service Lines

All service lines shall meet with the requirements of this section of the specifications for pipe and joint materials as outlined below. Service lines under paved areas shall be bedded, as required for mains, from the main to the limits of the pavement.

Minimum size of any service line or building sewer shall be 4" nominal diameter. Size of service line for multi-family or non-residential applications shall be as required by the Arkansas State Plumbing Code latest revision.

All 4" service lines must be constructed of ductile iron or cast iron pipe or PVC Pipe as specified in Sections M2.5, M2.7 and M2.8 of these specifications. Service lines larger than 4" shall be constructed of material approved for main extensions by City Corporation.

M3 - MANHOLES

Concrete:

Concrete used in the construction of manholes shall conform to the requirements of concrete and reinforcing steel for either Class A or Class B concrete.

Mortar:

Mortar shall be composed of one part Portland cement to two parts fine aggregate by volume to which shall be added seven pounds of hydrated lime with each sack of cement. Cement and fine aggregate shall conform to the requirements of Concrete and Reinforcing Steel. Masonry cement shall be strictly prohibited for use in any part of manhole construction.

Brick or Block Manholes

Brick or block manholes shall be permitted only when specifically approved by the Utility.

Precast Manholes:

Precast concrete manhole sections shall be approved for use on a

case-by-case basis. No precast manhole bottoms shall be used. The first barrel section shall be embedded in the poured-in-place manhole bottom and shall form a structurally sound and water-tight joint.

Poured-In-Place Manholes:

Poured-in-place manholes shall be made of Class A concrete conforming to the requirements for concrete and reinforcing steel.

Drop Manholes

Materials used in the construction of drop manholes shall conform to the requirements of paragraphs above and other applicable parts of this specification. The fittings and pipe sections of the drop shall be ductile iron gasketed slip joint.

Manhole Rings and Covers

Covers shall have SANITARY SEWER cast on cover.

Combined weights of manhole ring and cover shall not weigh less than 260 pounds. The individual minimum weight for the lid shall be 125 pounds; and for the ring shall be 135 pounds.

Rings and Covers shall be free from porosity, blowholes, hard spots, shrinkage, distortion, and other defects. They shall be smooth and well cleaned by shotblasting.

Metal used in the manufacture of the manhole rings and covers shall conform to ASTM A48-76 Class 35B for gray iron or ASTM A536-80, GRADE 65-45-12 for ductile iron.

All manhole rings and covers shall be manufactured true to pattern. Component parts shall fit together in a satisfactory manner, and shall be of nonrocking design, or shall have machined bearing surfaces to prevent rocking and rattling under traffic.

The dimensions of the ring and cover shall conform to those as shown on the standard details for sewer line construction. Cast dimensions may vary one-half the maximum shrinkage possessed by the metal or +/- 1/16 inch per foot.

Self-sealing covers shall be required when the top rim elevation is below the 100-year floodwater elevation. The self-sealing gasket shall be installed as per the Standard Details and manufacturer recommendations.

The manhole ring and cover shall be similar and equal to Model 250-24A as manufactured by Western Iron Works.

Manhole Steps:

Manhole steps shall be corrosion resistant, coated and reinforced, and shall be similar and equal to Perma-Step 100-2 as manufactured by Utility Products, Incorporated, 402 West Rhapsody, San Antonio, Texas or polypropylene coated and reinforced steps as manufactured by ICM, Incorporated, Jacksonville, Arkansas.

M4 - CONCRETE AND REINFORCING STEEL

Cement:

Cement shall be Portland Cement conforming to AASHO Designation M 85, Type I. Type III cement, high early strength, may be used if approved by the Engineer.

Water:

Water used in mixing concrete and mortar shall be free from injurious amounts of acids, alkalies, oils, sewage, and vegetable matter. It shall be fit for drinking.

Composition and Strength:

Concrete shall be composed of Portland Cement, fine and course aggregate and water proportioned in keeping with the following:

	<u>Class A Concrete</u>	<u>Class B Concrete</u>
Min. Sacks of Cement Per CY	6	5
Consistency Range in Slump-In.	2 - 4	2 - 4

Proportioning of concrete shall be by weight except that water may be measured by volume.

A 1 cubic foot sack of Portland Cement will be considered as 94 pounds in weight.

A gallon of water will be considered as weighing 8.33 pounds.

All Class "A" concrete shall be ready mix concrete conforming to ASTM Standard C94. Job site mixed Class "A" concrete shall not be permitted.

Class "A" concrete made with ordinary Portland Cement shall have a minimum compressive strength at 28 days of 3,500 psi. Class "B" concrete made with ordinary Portland Cement shall have a minimum compressive strength at 28 days of 3,000 psi. If made with high early strength cement, those strengths shall be attained at the age of 7 days.

All reinforcing bars shall be "Billet-Steel Concrete Reinforcement Bars" conforming to ASTM Designation A15 or "Rail-Steel Concrete Reinforcement Bars" conforming to ASTM Designation A16. Billet-

Steel bars shall be intermediate grade with minimum yield point of 40,000 psi.

All reinforcing bars shall be deformed bars. Deformation shall comply with the "Minimum Requirements for the Deformation of Deformed Steel Bars for Concrete Reinforcement - ASTM Designation A305".

Use

Class "A" concrete shall be used on all structures including manholes and for Class "A" pipe bedding.

Class "B" concrete may be used for all concrete work except as specified above and as shown on the standard details.

Class of concrete shall be shown on the plans in all locations where concrete is required.

Admixtures

Admixtures, other than air-entraining agents and High Early Strength agents shall be used only with the written permission of City Corporation or Engineer.

Placement

Concrete shall be placed in accordance with "Recommended Practice for Measuring, Mixing and Placing Concrete" (ACI - 304).

M5 - PIPE EMBEDMENT MATERIALS

Description

This section covers materials used for embedment of sanitary sewer mains. Unless otherwise specified herein or shown on the plans, embedment materials shall be restricted to Class I or Class II materials as described below and in accordance with ASTM D 2321-74 (Standard Recommended Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe). Class III, IV or V embedment materials are unacceptable.

Class I Embedment Material

Class I material consists of angular, 9.5 to 19-mm (3/8 to 3/4 inch) clean, graded stone with minimum fine material (less than 5% by weight passing #4).

Class II Embedment Material

Class II material consists of crushed graded stone with maximum particle size of 40 mm (1 1/2 inch), variously graded and

containing small percentages of fines (less than 5% by weight passing #4). Materials shall be granular and non-cohesive, either wet or dry.

M6 - PAVEMENT REPAIRS

State Highways

Materials used in the repair of State Highways shall meet with the approval of the Arkansas Highway and Transportation Department.

City and County Roads

Materials used in the repair of County roads shall meet with the approval of the City or County Roads Department or as specified below. Thickness of pavement repair shall not be less than the existing thickness or as specified below.

All pavement, gravel, native material shall be removed from site. Backfill of street cut sections shall be 3/4" minus crushed stone as approved by City Corporation and compacted to a density of 95% AASHTO T-180 modified or greater. Moisture shall be added as required to attain specified density. Immediately after laying the pipe in a street crossing, the crushed stone shall be added in 9-inch lifts. Use a vibrating plate compactor to achieve the density requirements. Top of base shall be a minimum of 4-inches below existing asphalt pavement edge or a minimum of 6-inches below existing portland cement pavement edge.

Asphaltic concrete hot mix surface course or cold mix surface course, if approved by the ENGINEER, shall be a minimum of two (2) inch layers of two (2) inches thick and shall meet with the requirements of the Arkansas State Highway Commission Specifications for Type I or Type II Asphaltic Concrete Hot Mix Surface Course. Immediately after base is placed, asphalt concrete, as specified above, shall be placed to final density using a vibrating plate compactor or other approved method.

Gravel surfacing shall meet with the requirements of the Arkansas State Highway Commission Specifications for Crushed Stone Base Course, Grade SB-2. Base shall be full depth thickness when placed under any asphaltic concrete hot mix surface course as specified in this section. Where an existing gravel road is to be repaired, a minimum of eight (8) inches thickness shall be used.

Prime coat shall meet with the Arkansas State Highway Commission Specifications for Prime Coat. Prime Coat shall be a minimum of 0.30 gallons per square yard or as otherwise approved.

Concrete and reinforcing steel shall meet with the requirements of SECTION M4 - CONCRETE AND REINFORCING STEEL. Concrete shall be a

minimum of Class A concrete or as approved by the governing agency. A minimum of six (6) inches thickness shall be placed as road surface. Immediately after base is placed, concrete surface shall be placed. In the event the City requires the street be immediately opened for emergency vehicles, one-half the street width shall be paved. The one-half street width for traffic shall be brought to grade with 3/4-inch minus crushed stone and maintained until concrete strength is attained and approved by Utility or City. When approved, the remaining concrete placement shall be completed. Contractor shall be responsible for proper traffic control devices as approved by the City.

Other Roads or Streets

Repair of roads, streets or other public rights-of-way not covered in these specifications, shall meet with the approval of the local governmental agency or private property owner having jurisdiction. Materials used shall meet with the requirements of Paragraph M6.3 above, or as otherwise approved.

Temporary Repairs

All temporary repairs made in order to properly maintain traffic shall meet with the approval of the governmental agency or private owner having jurisdiction. Materials shall meet with the requirements of these specifications or as otherwise approved.

M7 - LOW PRESSURE SEWER SYSTEM

DESCRIPTION

Low Pressure Sewer Systems are not to be preferred or used in applications that can be served by gravity sewer systems. Each grinder pump system shall be approved by the UTILITY on a case by case basis.

Low Pressure Sewer System shall be planned and designed to incorporate an approved limited area with defined area and topography boundaries. The designing engineer shall specify the limits of ultimate development. Design data shall include the number and type of residential and commercial units planned.

SYSTEM DESIGN

Design shall include a plan and profile drawing of the entire pressure system. Pump locations on the lots, location and direction of flow of each lateral, branch and main, and the point of discharge should be shown. For ease of identification each pipe branch and section should be numbered.

Clean out and flushing stations should be incorporated into the

pipe layout. In general, cleanouts should be installed at the terminal end of each main, a maximum of 400 feet on straight runs of pipe, and whenever two or more mains come together and feed into another main.

The Low Pressure Sewer System shall be designed for normal pressures of 40 psi or less. Mains shall be a minimum of 2 inches in diameter with design velocities between 2 feet per second and 5 feet per second.

The system should be designed so that the maximum heads at the branch ends approximate 92 feet. This will provide optimum scouring velocity, minimum sewage holding capacity, and the most economical pipe installation.

PIPE MATERIAL

Polyvinyl Chloride (PVC) Sewer Pipe - PVC pipe for mains and service lines of the Low Pressure Sewer System shall conform to current ASTM D-2241 PVC pipe SDR-21 PR 200, IPS - PVC gasket pipe.

Ductile Iron Pipe - DIP for mains of the Low Pressure Sewer System shall conform to current ANSI/AWWA C150/A21.50 Class 50 and lined with cement mortar in accordance with current ANSI Standard A21.4. Pipe shall be manufactured for use with the type joints specified.

Force mains shall have a minimum depth of cover over the top of pipe of 30 inches. A continuous 14-gauge THNN copper wire shall be installed with all non-metallic pipe including service lines. The wire shall be laid along the pipe passing completely around the pipe at intervals not to exceed 20 feet. The wire shall be looped around valves, saddles, curb stops and other appurtenances in such manner that there is not interference with the operation of the appurtenances.

VALVE MATERIAL

Isolation valves shall be bronze gate valves Class 125 Threaded Non-rising Stem, Screwed Bonnet, Solid Wedge Disc Crane No. 438, or equivalent.

Check valves shall be bronze swing type, Class 125 Threaded, Bronze Disc, "Y" Pattern, Screwed Cap Crane No. 37, or equivalent.

CONSTRUCTION METHODS AND POLICIES

Low Pressure Sewer System shall be constructed according to the standard methods as outlined in the general section of the specification contained herein, except for the following special construction specifications.

Service lines from individual residences shall be PVC SDR-21 Class

200 pipe. Service lines shall be 1 1/2 inch diameter or a larger size specified by the ENGINEER and approved by the UTILITY. Service lines shall be buried a minimum of 18 inches below finish grade. Isolation valves and check valves shall be installed in a single valve box at the property line in a designated easement and a location approved by the UTILITY. Said valve box may be plastic and shall be a type and size approved by the UTILITY.

Cost and installation of the grinder pump system shall be provided by the property owner or improvement district. All material and labor shall be warranted by the installer and/or supplier for a period of one (1) year after the system is first placed in operation. The UTILITY will provide maintenance and service as required due to normal wear and tear for the pump and controls, check valve and isolation valve at the main after the one (1) year warranty period. Actual costs to repair failures due to abuse by the owner shall be paid by the owner.

The property owner shall be responsible for proper maintenance, upkeep and replacement of the service line, power supply and basin.

Property owners and developers shall furnish all easements and access required by the UTILITY to properly maintain and service the sewer mains and associated pumping equipment.

The property owner shall not bury, build over or in any other way make inaccessible the lines and pumps for which the UTILITY is responsible.

When grinder pump systems are included in a sewer extension, the developer/owner shall furnish the UTILITY, without cost, the number of complete pump/motor assemblies according to the following schedule:

<u>Grinder Pumps in District</u>	<u>Spares Furnished to UTILITY</u>
1 - 10	1
11 - 20	2
21 or more	10% (Add one for any fraction)

SERVICE LINE

The 1 1/2 inch discharge line and service line shall be installed 24 inches below the top of the basin. A section of galvanized pipe shall be connected to the basin and extend a minimum of 4 feet or to a longer length if required to reach the service line trench having an undisturbed trench bottom.

The service line shall be pressure tested from the basin connection to the force main prior to final installation of the pump assembly.

The pressure test shall be performed in accordance with the Force Main Leakage Test procedure as outlined in the general section of

the specification contained herein.

SIMPLEX GRINDER PUMP SYSTEM

GENERAL DESCRIPTION

Simplex (one pump) grinder pump systems mounted in a fiberglass sewage collection basin shall be provided as a minimum for each single family or duplex dwelling served by a sewer collection force service line. The pump shall be automatically controlled through the use of mercury level controllers functioning in coordination with a control panel mounted remote from the basin. The basin shall be installed below ground and plumbed in by a plumber licensed in the State of Arkansas.

PUMP DESIGN

The pump shall be of a centrifugal design for submersible use and shall have a minimum horsepower rating of two. The sewage cutter/grinder mechanism shall be of hardened and ground stainless steel capable of macerating solids into fine slurry. The grinder cutting impeller shall extend beyond the shredding ring to minimize the possibility of large solids clogging the suction inlet. Recessed grinder cutting impeller designs will not be acceptable. The pump motor shall be oil cooled and have a high temperature cut-off switch imbedded in motor windings. The pump seal chamber shall be equipped with a moisture sensing seal failure probe which shall cause a warning light to glow bright in the control panel in the event of seal leakage. Pump shall be Myers WGL 20-21 grinder pump or equivalent.

FIBERGLASS BASIN

The basin shall be fiberglass and be manufactured to be water tight through a filament wound or hand lay up system and shall be a type of construction strength and material approved by the UTILITY. A resin rich mixture shall be used. Stainless steel fasteners shall be encapsulation in the top lip to which a cover of fiberglass or epoxy coated steel shall be bolted. Finished dimensions shall be 30 inch diameter by 60 inch or 72 inch deep as required by elevation of piping. The circumference of the basin bottom shall be equipped with anti-flotation hold downs which shall be imbedded in concrete. Basin shall be Myers grinder pump station package or equivalent. Basin shall be backfilled with select material with no rocks or stones larger than 3 inches.

The top of the basin shall be elevated a minimum of 4 inches above finish grade with positive run off grade around all sides. The basin and pump assembly shall be located a minimum of 20 feet from all buildings, property lines and water systems.

STATION INTERNAL COMPONENTS

- A. **Liftout Rail** - The pump station shall be equipped with the following provisions. A liftout and rail system for pump placement and removal shall not require personnel to enter basin for service or maintenance. The pump shall be removable by sliding upward while being controlled on a stainless steel guide rail. The connecting and disconnecting of the pump shall be accomplished through the use of a two piece brass sliding disconnect device. This device shall seal through the use of an "O"-ring. A portion of this device shall remain in the basin as an integral part of the discharge piping. The removable portion shall contain the "O"-ring and shall be an integral part of the pump and check valve piping.
- B. **Mercury Level Controls - High Level Alarm Switch** Three (3) mercury level control switches shall be provided for: Pump On, Pump Off and High Level Alarm functions. The switches shall be a mercury switch, encapsulated in polyurethane foam for corrosion and shock resistance. The switch shall be weighted to hold desired position in the sump. To ensure optimum longevity, mercury contacts shall be of the mercury to mercury type and encapsulated in a steel tube and shall be rated for 20 amps at 115 VAC.

JUNCTION BOXES

Junction box shall be non-metallic in construction and shall have brass threaded inserts for which to secure the cover. The cover will be fastened to the junction box by means of stainless steel machine screws. To preclude the possibility of dropping the screws into the basin, the junction box cover will be furnished with screw retainers. The screws will have large non-metallic heads so that the heads can be tightened by hand using the thumb and finger. The junction box shall have a lower chamber which will house all electrical conductors entering the basin. The lower chamber will be used to seal off the junction box from ground water. All cords shall be potted into the lower chamber of the junction box.

The sealing compound used shall be Chico AZ used in conjunction with Chico "X" fiber or equal. Sealing compound will be furnished by pump station vendor.

CONTROL PANEL

A Master lock, type #3; or equal, shall be furnished with each control enclosure. All locks furnished for the system shall be keyed alike such that only one key will be required to open all panels. Keys and locks shall be furnished by the pump station vendor consistent with those previously installed.

All panels shall be in NEMA 3 enclosures for outdoor use and box

cover shall have hasp for lock, a flashing red high level alarm light, and a main disconnect with door interlock so that power from the panel must be switched off before the door is opened. The alarm light shall have flashing red indication, shall be NEMA 4 rated, shall be oil tight and water tight, and shall be 1 1/2 inch diameter or larger.

Panels shall be for 230 volt single phase. Control circuit and alarm circuit shall be for 115 volts.

The following components shall be provided for each pump; circuit breaker, magnetic contactor with 2 leg, quick trip ambient compensated overload block, H-O-A switch, green run light, amber seal fail light, alarm switch for on-off and test, connection terminal strip, start capacitor, run capacitor, start relay, and an elapsed time meter.

The control panel shall include a schematic wiring diagram permanently posted to the inside cover of the box. All terminals will be clearly labeled with proper designation.

The power cable shall be of wire size and run in conduit in accordance with the National Electrical Code from the junction box at the basin to a disconnect box at the building exterior wall.

Control panel shall be Myers CGL-21SW or equivalent.

INLET HUB

Shall be provided loose by the pump station vendor and shall be constructed of PVC with a rubber pipe gasket to accommodate PVC inlet pipe. The hub shall be provided with stainless steel nuts, bolts and washers for bolting to tank side wall.

Installer shall cut the inlet hole and install the hub in a workmanlike manner at a level between the discharge level and 1-foot above the manufacturers recommended alarm float level.

SERVICE LINE

VARIABLE REQUIREMENTS

Where the static discharge head of the pumping unit is less than 15 feet, or in any pumping stations designated by the ENGINEER a spring loaded check valve shall be installed in the discharge line of each pumping unit.

Where field conditions require, or in any pumping station designated by the ENGINEER, a siphon breaker shall be installed in the discharge line of each pumping unit. Siphon breakers shall be a minimum of 1 1/4-inch in size and be approved by the ENGINEER prior to installation. Manufacturer/Supplier shall furnish the

UTILITY with a minimum of two operations and maintenance manuals and parts lists.

DUPLEX GRINDER PUMP SYSTEM

GENERAL DESCRIPTION

Duplex (two pump) grinder pump systems mounted in a fiberglass sewage collection basin shall be provided as a minimum for each three family or larger residential unit or commercial unit served by a sewer collection force service line.

Pump shall be a grinder pump of the centrifugal type with recessed type impeller an integrally built-in grinder and submersible motor. Motor shall have seal failure detector and high temperature shut off. The pump shall be installed on a lift out rail type system in such a way that solids are fed in an up-flow direction to the grinder impeller, with no feet, rails, or other obstructions below the grinder inlet. Unless specified otherwise in this section of the specifications, all requirements for the simplex grinder pump systems are applicable to the duplex grinder pump systems.

OPERATING CONDITIONS

The pump shall be capable of operating, without overloading, at any point on the pump performance curve.

MOTOR

The motor shall be 5 HP and will operate at 1750 or 3450 rpm.

The motor shall be three phase, 460 volt, and shall be of the capacitor start, capacitor run type.

To ensure optimum concentricity, the motor shall have a heat shrunk stator. The stator windings shall be of the open type with insulation rated for 150°C maximum operating temperature. The winding housing shall be filled with a clean high dielectric oil that will lubricate bearings and transfer heat from the windings to the outer shell.

Motor shall have three bearings; an upper ball bearing, an intermediate ball bearing, and a lower sleeve guide bearing to accommodate radial load from the grinder, impeller. Ball bearings shall be designed for a B-10 life.

A heat sensor thermostat shall be attached to the windings, and shall be connected in series with the motor starter coil to stop motor operation if the motor temperature exceeds 220°F. The high temperature shut off shall cause the pump to cease operation should a control failure cause the pump to run in a dry wetwell. The high temperature shut off shall automatically reset and restart the

motor when the temperature drops to a safe limit.

The common motor pump, and grinder shaft shall be of one piece and shall be 416 stainless steel. The pump impeller and grinder impeller shall thread onto shaft.

SEAL CHAMBER

The motor shall be protected by two mechanical seals, mounted in tandem, with an oil filled chamber between the seals for lubricating seal faces. Seal faces shall be carbon and ceramic lapped to a flatness tolerance of one light band. Metal parts and spring for seals shall be stainless steel.

SEAL FAIL DETECTOR

A double electrode shall be mounted in the lower end of seal chamber to detect any water leakage into the chamber. Electrodes are connected to an amber seal failure light in the control panel. The seal failure warning system shall not stop the motor, but indicate leakage so that pump lower seal can be serviced before motor is damaged.

PUMP IMPELLER

The impeller shall be of the recessed type to provide for an open unobstructed passage through the volute. The impeller shall be constructed of 85-5-5 bronze and shall have pump out vanes on the back side of the impeller to help keep trash away from seal and reduce pressure at the seal faces.

GRINDER CONSTRUCTION

Grinder assembly shall consist of a grinder impeller and a shredding ring mounted directly below the pump volute inlet. Grinder impeller shall thread onto shaft and will be locked with a screw and washer. The shredding ring shall be held in the housing by a snap ring and steel retaining ring. Both the shredding ring and impeller shall be removable from the outside without dismantling the pump.

Grinder assembly shall be of such construction that no clearance adjustments are required when reassembling. The grinder impeller and shredding ring shall be of 440 C stainless steel and shall be hardened to 58-60 Rockwell.

PUMP AND MOTOR CASTINGS

All castings shall be of high tensile cast iron and shall be treated with phosphate and chromic rinse and be painted inside and outside with baked on epoxy paint before machining. Likewise, the interior of the volute shall be coated with baked on epoxy paint.

POWER CORDS

Motor power cords shall be #14 type ST, four conductor, and motor control cord to be #16 ST, four conductor. All cord lengths shall be such that no splices will be required between the pump and junction box at the top of the basin. Both cords shall be potted into motor end cap with epoxy potting compound. In addition, a rubber grommet that seals both cords shall be clamped on the cords by the end holding cap. Cords shall withstand a pull of 150 pounds without loosening. The end cap shall have female thread tapping for 1 1/2-inch conduit.

LIFT OUT RAIL SYSTEM

Rail system shall consist of a combined free flow check valve and seal fitting that mounts vertically into a stationary discharge casting. A check valve and seal fitting shall seal with "O"-rings and a tapered rubber seal ring into funnel of discharge casting. Check valve flapper shall be spring loaded to prevent water hammer slam. Discharge castings shall be furnished with right and left hand discharge pipe connections for duplex systems. Discharge pipe tapping shall be 1 1/4-inch standard pipe thread. Valve casting and discharge casting shall be painted inside and outside after machining, with baked on epoxy paint.

An upper guide plate shall be attached to liftout fitting and will guide pump on rails. A lifting eye shall be attached to plate and 5/6-inch galvanized chain and clevice shall be furnished for lifting pump.

The lift out rail system must also employ ball type check valves with a bronze disconnect utilizing an "O"-ring sealing device. This system shall use a 3/16 inch stainless steel lifting cable.

Guide rails shall be 3/4 inch 304 stainless steel installed parallel.

Alternate guide rail systems utilizing other means of disconnect devices are not acceptable.

LEVEL CONTROLS

Sump level shall be controlled with Myers model FLCW level controls or equivalent. These controls shall be of the mercury tube sealed in polyurethane float and weighted to hold position in the sump. The cord connecting the control shall be SJO type.

Three switches shall be provided; Pump On, Pump Off, and High Level Alarm.

A mounting bracket that attaches to the basin wall shall be provided to support the controls.

Control cords shall connect to junction box with cord grip seal connectors.

ELECTRICAL CONTROL PANELS GENERAL

All panels shall be in NEMA 3 enclosures for outdoor use and box cover shall have hasp lock, and a flashing red high level alarm light with globe guard.

Panels shall be for 460 volt three phase. Control circuit and alarm circuit shall be 115 volts.

The following components will be provided for each pump; circuit breaker, magnetic contactor with 2 leg, quick trip ambient compensated overload block, H-O-A switch, green run light, amber seal fail light, alarm switch for on-off and test, and connection terminal strip.

Single phase panels shall also have start and run capacitors and start relay.

The control panel shall have the following options:

1. Elapsed Time Meter for each Pump
2. Lightning Arrestor
3. Phase Monitor
4. Thermostatically Controlled Condensate Strip Heater
5. Remote Alarm Terminals and Circuitry
6. Audible Alarm Horn
7. Intrinsically Safe Relays
8. Mounting Stand for Control Panel
9. Duplex 115 Volt Utility Receptacle
10. Panel Mounted Service Light

The control panel shall include a schematic wiring diagram permanently posted on the inside cover of the box. All terminals will be clearly labeled with proper designation.

STARTUP

Startup services shall be performed by the authorized factory representative with UTILITY personnel observing. Manufacturer shall furnish two operation and maintenance manuals and parts lists per system.

C1 - DESCRIPTION

General

This part of the specifications shall govern the construction procedures used in the installation of sanitary sewerage facilities under the jurisdiction of City Corporation. Construction procedures other than those outlined in this specification shall meet with the approval of City Corporation. Complete specifications covering any unusual or special construction procedures shall be submitted for approval and approval must be received prior to beginning any construction operations.

IMPORTANT: No sewer construction activity shall commence, either initially or after interruption of construction for two (2) normal working days, until the manager or engineer of City Corporation has been notified and notification has been acknowledged. Violations of notification may require the Contractor to restore all activities to their previous condition or to uncover all construction work for inspection and approval.

C2 - EXCAVATION, BEDDING, EMBEDMENT, AND BACKFILLING

Excavation - General:

All excavation shall be carried accurately to the line and grade shown on the Plans and as established by the Engineer. When excavation is carried below or beyond that required, the space shall be filled with bedding or with concrete, in accordance with the Engineer's instructions.

Where necessary to protect the labor, the work, or adjacent property, the Contractor shall provide and install shoring. Such shoring shall remain in place until the backfill has proceeded to a point where it can be safely removed, except that, if in the opinion of the Engineer, damage is liable to result from withdrawing shoring, it shall remain in place.

All excavation shall be dewatered before any construction is undertaken therein. Concrete shall be placed only upon dry, firm foundation material and pipe shall be laid only in dry trenches. All pipe ends shall be closed using devices or materials approved by City Corporation at the end of each day's operation.

Excavation - Trench Sewage Force Mains

Trenches for force mains shall be of the width and depth necessary for the proper installation of the pipe. All pipe lines shall be laid in trenches of such depth as to provide a minimum cover of thirty inches (30") over the top of pipe barrel unless otherwise shown on the Plans.

Width of pipe trench for sewage force mains shall be adequate for the installation of the pipe and make-up of joints, but in no case shall the width of the trench at the top of the pipe be wider than the outside diameter of the pipe plus two (2) feet.

The bottom of the trench shall be accurately graded so that the pipe will be in continuous and uniform contact with and have a longitudinal bearing on undisturbed soil for the full length of the barrel of the pipe. The trench bottom shall be excavated by hand below the bell ends so that the bell does not bear on the trench bottom.

If the soil at the bottom of the trench is mucky or if the subgrade is too soft to properly support the pipe, the Contractor shall excavate below the lower extremity of the pipe as directed by the Engineer, and place select material as defined in Section C2.6. Said select material shall be thoroughly tamped into place to receive the pipe.

Excavation - Structural:

The Contractor shall perform all structural excavation required on the Plans. Excavation shall extend a sufficient distance from walls and footings to allow for forms and for proper inspection. Except where the Plans indicate that concrete may be deposited directly against excavated surfaces.

Excavation - Trench for Gravity Sewer Pipe:

All pipe lines shall be laid in trenches of such depth as to provide a minimum cover of thirty inches (30") over the top of pipe barrel unless otherwise shown on the Plans.

In order to avoid superimposed loading in excess of the designed and specified pipe strength and to provide sufficient room for proper installation and bedding of sewer pipe, the trench widths for the pipe sizes used shall be kept within the limits specified as follows:

<u>Inside Pipe Diameter</u>	<u>Maximum Width of Trench at Top of Pipe</u>	<u>Maximum Width of Trench 12" Above Outside Top of Pipe</u>
6"	2' - 6"	2' - 10"
8"	2' - 6"	2' - 10"
10"	2' - 6"	3' - 0"
12"	3' - 0"	3' - 4"
14"	3' - 0"	3' - 6"
15"	3' - 0"	3' - 6"
16"	3' - 0"	3' - 6"
18"	3' - 6"	4' - 0"
21"	3' - 6"	4' - 4"
24"	4' - 0"	4' - 8"

27"
30"

4' - 0"
4' - 6"

5' - 0"
5' - 6"

If it becomes necessary to reduce the earth load on the trench banks back to prevent sliding and cave ins, it will be permissible to cut the trench banks on a slope above an elevation two (2) feet above the outside top of the pipe. Under no circumstances, however, shall the specified maximum width twelve (12) inches above the outside top of the pipe be exceeded, except at points where the combined superimposed earth and live loads on the pipe are sufficiently low to permit an increase in the specified maximum trench width, and then only where such an increase in trench width is authorized by the Engineer.

Shaping of the trench bottom and bedding procedures shall be as specified in this section. Under certain conditions, excavation below the planned invert of the pipe will be required before preparation of the bedding is begun, as listed in the following paragraphs:

If the soil at the bottom of the trench is mucky or in such condition that it cannot be properly shaped and graded, or if the subgrade material is too soft to properly support the pipe, the Contractor shall excavate below the normal subgrade elevation as directed by the Engineer. Wherever excavation is carried below the specified subgrade, at the direction of the Engineer, the Contractor shall provide and install a fill of Class II bedding thoroughly tamped into place up to an elevation sufficient to prepare the subgrade as specified in this section for the particular classification of bedding that may be required.

Where water occurs in trenches, they shall be excavated to a depth of approximately six (6) inches below grade and backfilled with gravel to a point approximately 1/6 of the internal pipe diameter or 2", whichever is the greater, above grade. Pumps shall then be kept operating, taking suction out of a sump below the gravel so as to hold the water level well below the bottom of the pipe until the joints have been placed and firmly bedded in position.

The Contractor will be required to keep the sides of the excavation vertical, except as herein before provided. Shoring shall remain in place until the backfill has proceeded to a point where it can safely be removed, except that, if, in the opinion of the Engineer, damage is likely to result from withdrawing sheeting and shoring, it shall remain in place.

Excavation for manholes and other accessories shall be sufficient to leave at least twelve (12) inches in the clear between their outer surfaces and the embankment or timber which may be used to protect them.

The excavation of trenches shall not advance more than three

hundred (300) feet ahead of the completed pipe work and backfill, except by permission of the Engineer or Inspector.

Excavation for Manholes:

Excavation for manholes shall be as specified in Section C8 - Manholes.

Disposal of Excavated Materials:

Excavated material shall be stockpiled adjacent to the work to be used for backfilling as required. Excavated material which is unsuitable for backfilling and excess material and all excavated material from a street cut shall be removed from the site and disposed of in a manner approved by the Engineer.

Use of Explosives:

In the event the use of explosives is necessary for the efficient prosecution of the work, the Contractor shall notify the Engineer in advance of their use and shall exercise every precaution to prevent damage to adjoining improvements or property by reason of their use. Any damage to private property resulting from the use of explosives shall be the liability of the Contractor. In all cases where the explosives are necessary, a permit from the local governmental agency shall be obtained by the Contractor prior to their use.

Bedding, Embedment, and Backfilling of Sewer Lines:

General Requirements:

All gravity sewer pipe shall be installed using Class I embedment materials as specified in Section M5 - Pipe Embedment Materials, except that cast or ductile iron pipe conforming to Sections M of these specifications may be bedded as specified for "Type 1" laying conditions in ANSI A21.50. "Thickness Design of Ductile-Iron Pipe", latest revision, unless structural or foundation requirements indicate otherwise.

Backfilling of gravity sewer lines shall include the refilling and consolidation of the fill in the excavation up to the surrounding ground surface when required by the Engineer. In all cases, it is essential that the complete backfill be done in such a manner to minimize voids in the backfill.

Select materials shall be used for backfilling up to a point 12 inches above the top of the pipe. The select material shall be good soil material, sand, gravel, or bedding, and shall be free from rocks larger than three (3) inches or hard lumpy materials. No materials of perishable, spongy, or otherwise unsuitable nature shall be used as select material.

All sewer pipe shall be bedded and backfilled in accordance with this section. Also the appropriate ANSI/ASTM specifications for all sewer pipe must be complied with if the ANSI/ASTM specifications are more stringent than City Corporation's requirements.

Where trenches are excavated across existing or proposed paved areas, the entire trench shall be backfilled with 3/4" minus crushed stone or SB-2 crushed stone and compacted to a density of 95% AASHTO T-180 modified or greater. In the case of city streets, Section M6 shall govern.

The backfill of materials in trenches under existing or proposed paved areas shall be compacted with mechanical devices manufactured for that purpose from the top of the pipe to the top of the existing or proposed subgrade/base as directed by the Engineer.

Bedding and Backfilling of Rigid Pipe:

The bedding of rigid pipe (concrete, ductile iron) shall be completed as described below and in accordance with the trench detail shown on the standard details sheet appended to these specifications.

Excavation shall be done to a depth of 6" below the bottom of the pipe wherever the bottom of the trench is rock, Where excavation is done below the pipe for any reason, the space shall be filled with select material as defined in Section C2.6 and compacted as required to provide a firm non-settling foundation for the bottom of the pipe. Said select material shall be brought to the required grade. The bottom of the trench shall be accurately graded so that the pipe will be in continuous and uniform contact with and have a longitudinal bearing on undisturbed soil for the full length of the barrel of the pipe. The trench bottom shall be excavated by hand below the bell ends so that the bell does not bear on the trench bottom.

The pipe and joints shall be bedded with select materials to the spring line of the pipe and along the full width of the trench. The intent is to cradle the pipe so that the full length of each joint is uniformly supported on firm bedding and the weight of pipe and fill is borne uniformly by the lower half of the pipe barrel.

Embedment and Backfilling of Flexible (PVC) Pipe:

The bedding and backfilling of PVC pipe shall be completed as described below and in accordance with the trench details shown on the standard detail sheet appended to these specifications.

Excavation shall be done to a depth of six (6) inches below the bottom of the pipe and wherever excavation is done below this depth for any reason, the space shall be filled with Class I bedding

material unless otherwise approved in writing by City Corporation.

The pipe and joints shall be bedded in Class I bedding materials to the top of the pipe and along the full width of the trench at all depths.

The Class I bedding materials shall be compacted as required to provide a firm non-settling foundation for the bottom of the pipe. The purpose is to cradle the pipe so that the full length of each joint is uniformly supported on firm bedding and the weight of pipe and fill is borne uniformly by the pipe barrel.

Service Lines:

In areas to be paved, the bedding of service lines shall meet the requirements set forth above.

Manholes:

Backfilling of manholes is specified in Section C8 -Manholes.

C3 - DEWATERING OF TRENCHES

Well Pointing:

Well pointing where required to keep the excavation dry and the subgrade stable, shall be installed when the excavation is within two (2) feet of the water table, except as hereinafter provided, and shall be in continuous operation until backfill is completed to this level. When construction equipment is to be operated in an area that has been excavated and well pointing is required to keep trench excavation dry and the subgrade stable, the well pointing shall be installed when the excavation is within five (5) feet of the water table. There shall be sufficient pumping equipment, in good working order, available at all times, to remove any water that accumulates in excavations to the extent that a stable subgrade is obtained. Where the pipe line crosses natural drainage channels, the work shall be conducted in such a manner that unnecessary damage or delays in the prosecution of the work shall be prevented. Provision shall be made for the satisfactory disposal of surface water pumped so as to prevent damage to public or private property.

Trench Dewatering:

Dewatering of trenches other than by well pointing shall be accomplished by whatever means elected by the contractor; however, bedding material or pipe may not be placed in wet or unstable trenches. Soil that cannot be properly dewatered shall be excavated and dry material tamped in place to such a depth as may be required to provide a firm trench bottom.

Surface Runoff

Surface runoff water shall be diverted away from the trenches. Such diversion shall be into existing drainage structures, such as storm sewers, ditches or streams. Diversion of surface runoff shall be in such a manner to prevent flooding of streets or private property. All pipe ends shall be sealed water tight at the end of each day's operation, see Section C2.

Disposition of Water from Dewatering

All water removed from the trenches by well pointing or any other means shall be pumped, piped or drained into existing drainage structures, such as storm sewers, ditches or streams. The disposition of water from dewatering operations shall be accomplished in a manner that will prevent the flooding of public or private property. Discharge of trench water into a sanitary sewer is a violation of City of Russellville Sewer Ordinance and violators will be prosecuted as prescribed by law.

C4 - SHEETING AND SHORING

Cave-ins:

Where trench cave-ins are a possibility, adequate sheeting and/or shoring shall be provided so as to maintain the trench free from slides or cave-ins and safe for workmen.

Existing Structures:

Where existing buildings, other utilities, streets or other structures are in close proximity to the trench, adequate protection shall be provided by the use of sheeting and shoring to protect the structure from possible damage. In the case of streets or utilities, the contractor may elect to remove the street or utility provided that the removal and subsequent replacement meets with the approval of the City of Russellville, the utility owner, or whoever has jurisdiction of the structure. In all cases, it shall be the responsibility of the contractor to protect public and private property and any person or persons who might, as a result of the contractor's work, be injured.

OSHA (Occupational Safety and Health Administration) Regulations:

All trench and structural excavation shall be conducted as required by OSHA Subpart P - Excavations, as found in CFR 1926.650, 29CFR 1926.651 and 29CFR 1926.652. The Contractor shall maintain a "NUCA Competent Person" on the job site at all times while excavations are open or in progress.

C5 - PIPE LAYING

Gravity Sewer Lines:

Each joint of pipe shall be inspected carefully before being placed in the trench. Any joint found to be cracked, or otherwise so damaged as to impair its usefulness, shall be plainly marked in such a manner that the marking will not rub or wash off. Damaged joints shall be removed from the site as soon as feasible.

All sewer pipe shall be laid with the bell up-stream and work shall progress upgrade. Each pipe shall be laid to plan line and grade, or to line and grade directed by the Engineer, Laser beam type grade lights shall be used for all gravity sewer construction.

All lines shall be proved for alignment and grade by lamping. Care shall be taken that each spigot is centered properly in the bell of the proceeding pipe and properly seated, and that each pipe is solidly bedded. As the work progresses, the pipes shall be cleaned of all dirt and other foreign matter. They shall be maintained clean until accepted or put in service.

At the end of each day's work, and when for any reason the laying of pipe will be discontinued for an appreciable period, all open ends of pipe shall be closed in accordance with Section C2.

All service line ends shall be permanently capped in accordance with manufacturer's recommendations to provide a water tight seal.

The cutting of pipe for any reason shall be done in a neat and workmanlike manner without damage to pipe or pipe lining.

Pipe shall be lowered carefully into the trench in such manner that spigot and bell will not become contaminated. Spigot and bell shall be checked for cleanliness immediately before lubricating and insertion of spigot into bell.

Proper facilities shall be provided for lowering sections of pipe into trenches. Under no circumstances shall pipe be laid in water and no pipe shall be laid when trench conditions or weather are unsuitable for such work. Full responsibility for the diversion of drainage and for dewatering of trenches during construction shall be borne by the Contractor.

Spigot and bells shall be cleaned thoroughly before the application of lubricant and attachment of the preformed joint gasket. Application of lubricant and attachment of the gasket shall be in strict accord with manufacturer's recommendation.

Pipe shall not be placed in the trench without excavating for bells so that the entire barrel of the pipe is uniformly supported on the pipe bedding.

Pipe shall be supported to proper line and grade, and secured against upheaval or floating during the placement of the specified bedding for the pipe material being used.

In areas of known perched water tables above levels of the sewer mains and when instructed by Utility, the contractor shall construct one clay dam between each manhole. The dam shall be a nominal three (3) feet in width and extend the full width of the trench and from trench bottom to finish grade, except in paved areas.

Force Mains:

All pipe and fittings shall be installed to the line and grade as detailed on the plans. Subject to the approval of the Engineer, other fittings may be added to or substituted for those shown on the plans, should the need therefore arise during construction. This permissive stipulation in no way shall relieve the Contractor of the responsibility for furnishing and installing all fittings required for a complete and proper installation of main as detailed on the plans.

All dirt and other foreign matter shall be removed from the inside of pipe and fittings before they are lowered into the trench. They shall be kept clean during and after laying, care shall be taken to keep dirt out of the jointing space. At the end of each days work, and when pipe laying is discontinued for an appreciable period, open ends of pipe shall be closed with a cast plug or cap firmly secured in place by tamped jute or hemp or as specified in Section C2.

All pipe and fitting shall be lowered carefully into the trench in such a manner as to prevent damage to pipe, fittings or linings. Neither pipe nor fittings shall be dropped or dumped into the trench.

Spigot and bells shall be cleaned thoroughly before the application of lubricant and attachment of the preformed joint gasket. Application of lubricant and attachment of the gasket shall be in strict accord with manufacturer's recommendation.

Cutting of pipe, where needed, shall be done in a neat and workmanlike manner without damage to pipe or pipe lining.

Unless otherwise directed by the Engineer, pipe shall be laid with bell ends facing in the direction of laying and shall be laid up grade. Whenever necessary to deflect pipe from a straight line in either the horizontal or vertical plane, to avoid obstructions, or for other allowable reasons, the degree of deflection at any joint shall be not greater than that which will provide adequate gasket space entirely around the spigot end of pipe.

Deflections shall not exceed the maximum recommended by the pipe manufacturer.

Steep Grades:

Type of Pipe - Ductile iron pipe, meeting the requirements of Section M2 of the specifications, shall be used on all sewer lines when the grade is fifteen percent (15%) or greater. Mechanical joints with joint restraints may be required by City Corporation.

Connections to existing Sewers:

Connections to existing sewers shall not be made without approval of City Corporation.

All work shall be completed in a workmanlike manner using materials specified or as approved by City Corporation. Watertight connections shall meet with the requirements concerning tests of these specifications.

C6 - PIPE JOINTS

Pipe Joint Installation:

All pipe joints other than those specified herein shall be made in strict accordance with the manufacturer's recommendation and as approved. All joints shall be made watertight in accordance with the latest ASTM Standards. Excavation for bells or other joint protrusions shall be made to insure that the bottom of the pipe firmly rests against the bedding for entire length of the pipe. All joints between pipes of different material shall not be backfilled until City Corporation has inspected same for proper materials and methods

Installation of Push-On Joints:

Prior to jointing, the bell and spigot end of the pipes shall be cleaned thoroughly by whatever means are necessary to remove all foreign matter and attain the required cleanliness and not damage the joint and gasket surfaces. A wire brush shall be used as necessary. Particular care shall be exercised to clean the gasket seat.

Joints shall be made in strict accord with the recommendations of the pipe manufacturer. The rubber gasket shall be cleaned, lubricated and if required inserted in the gasket seat within the bell of the pipe to which connection is being made, and forced to a firm contact with the shoulder of the bell. When this initial insertion is made, the alignment of the added pipe shall be deflected from true alignment not more than 5° for 4" pipe, nor more than 3° for 12" pipe; deflections for intermediate size pipes shall be in conformance with the stated maximum deflections of the

manufacturer.

Installation of Mechanical Joints

The spigot end of pipe and the bell of fitting and the rubber gasket shall be cleaned thoroughly as specified for pipe joints in the paragraph above. The gland shall also be cleaned in a like manner.

After the gland and gasket are lubricated and placed on the spigot end of the pipe, a sufficient distance from the end to avoid fouling the bell, the spigot end shall be inserted in the fitting bell to firm contact with the bell shoulder. The rubber gasket then shall be advanced into the bell and seated in the gasket seat. Care shall be exercised to center the spigot end within the bell.

The gland shall be brought into contact with the gasket, all bolts entered, and all nuts made hand tight. Continued care shall be exercised to keep the spigot centered in the bell. The joints shall be made tight by turning the nuts with a wrench - first partially tightening a nut, then partially tightening the nut 180 therefrom and working thus around the pipe with uniformly applied tension until the required torque is applied to all nuts. Required torque ranges and indicated wrench lengths for standard cast iron bolts are as follows:

<u>Diameter</u> <u>Inches</u>	<u>Range of Torque</u>		<u>Length of Wrench</u> <u>Inches</u>
	<u>Foot</u>	<u>Pounds</u>	
5/8	40	60	8
3/4	75	90	10
1	100	120	14
1 1/4	120	150	16

Jointing dissimilar pipe materials:

Joints shall be as shown on the standard details unless otherwise authorized by City Corporation.

C7 - PIPE FITTINGS

Pipe Fittings Installation:

All pipe fittings shall be installed in strict accordance with the manufacturer's recommendations. Joints created by the installation of fittings shall meet with the requirements of Section C6 - Pipe Joints. Pipe fittings shall meet with the requirements of Sections M2 - Sanitary Sewer Pipe.

Wye or Tee Connections

Wye or tee connections placed in sanitary sewer lines for services

shall be installed in accordance with the manufacturers recommendations and as approved by City Corporation. Installation of wye branches shall be as indicated on the standard construction details. PVC wye fittings shall be SDR-26.

C8 - MANHOLES

Excavation and Backfill:

Excavation:

Excavation for manholes shall be completed in a workmanlike manner. The area of excavation of the base shall be only that necessary to provide an adequate base with its sides poured against undisplaced earth. All excavations shall be dewatered in accordance with Section C3 - Dewatering of Trenches before any permanent construction is started. Sheet piling and shoring shall meet with the requirements of Section C4 - Sheet piling and Shoring.

Where excavation is carried below plan grade because of unsuitable soil or for any other reason, the space below plan grade shall be filled with Class I bedding material thoroughly tamped or the space may be filled with concrete poured monolithically with the base.

Backfill:

Backfill of manholes shall be compacted to the specified density when and as specified by the Engineer. Where manholes are within the limits of paved areas, backfill shall be in accordance with the backfill requirements of pipe laying for those areas.

Backfill around manholes shall not be completed until adequate strength has been obtained to support the backfill without damage to the manhole. In no case will backfill be allowed on precast manholes, or poured-in-place manholes until the concrete is at least 48 hours old except as approved by City Corporation.

Inverts:

All pipe lines shall extend entirely through the manhole to a joint approximately 6" outside the manhole except where change in direction or where sizes of pipes makes such construction unfeasible. Pipe in a manhole at the upper end of the line or discharging into an existing manhole shall not extend entirely through the manhole. In all cases, the pipe or pipes shall extend entirely through the manhole wall so that a joint occurs approximately 6" outside the manhole wall. Depth and cross section of the invert of the manhole bottom flow line shall be approximately 1/2 the diameter of the outfall pipe. Curves in inverts shall have as long radius as feasible to facilitate flow. Shape of the invert shall be that approximating the bottom half of the pipe and inverts shall be brushed smooth.

The surface of the mortar fill used in forming the invert shall be sloped upward from the edge of the invert to the manhole wall. The upper half of any pipe extending inside the manhole wall shall be cut substantially flush with the wall. Any rough edge shall be smoothed with mortar.

Mortar for forming inverts shall be mixed in the proportions specified in Section M3 and an approved bonding agent shall be used over the entire surface of the bond. The use of masonry cement shall be strictly prohibited. When approved by City Corporation, mortar may be mixed in a mortar box. Mortar shall have a workable consistency, but shall be as dry as practical. Mortar thickness shall meet or exceed the bonding agent manufacturer's recommendation.

Inverts shall be formed in accordance with details shown on the standard manhole details.

Precast Manholes:

Precast concrete manhole sections shall be approved for use on a case-by-case basis. No precast manhole bottoms shall be used. The first barrel section shall be embedded in the poured-in-place manhole bottom and shall form a structurally sound and water-tight joint. Pipe penetrations shall be fully encased within the poured-in-place manhole bottom. Manholes of precast sections shall be positioned carefully upon the concrete base and be raised in a truly vertical plane.

Poured-in-Place Manholes:

Forms for poured-in-place manholes shall have cutouts to fit around the sewer pipe entering the manhole so that the form rests upon the concrete base. The space around cut-outs shall be filled with concrete and made water-tight. Aqua-plug, Preco, or Utility approved equal shall be used to fill voids after concrete is 48 hours old.

Poured-in-place manholes shall meet the requirements and details as shown on the standard details. The top section or cone shall be concentric.

Construction of poured-in-place manholes shall be in accordance with Section C9 - Concrete and Reinforcing Steel and other applicable parts of these specifications.

Drop Manholes:

Drop manholes shall be constructed as outlined above and as shown on the standard details.

Water-tight Manholes:

Construction of watertight manholes shall meet with the requirements outlined above for manholes and as shown on the standard details. Manholes shall be tested for infiltration and repaired in accordance with Utility requirements.

Manhole Details:

All manholes shall be constructed in accordance with the standard manhole details or as approved by City Corporation. Manholes 4' 0" or less in height shall have a 24" minimum, 30" maximum high cone section and maximum 12" high throat section.

Connection to Existing Manholes:

No connection or alteration to any manhole shall be made without the express approval of City Corporation. Connections requiring cutting through the wall of the manhole shall be done in a good workmanlike manner with a maximum hole size 4-inches larger than outside diameter of pipe. The hole shall be concentric with the pipe. No void space shall be allowed between the pipe and wall and the space shall be filled in accordance with Section C8.

Where an existing gravity outfall line requires the flow of sewage be diverted around the new construction, the contractor shall intercept the sewage flow at the existing manhole first upstream from the construction and shall provide suitable pumping equipment and rerouting conduit to pump the sewage around the involved construction. Discharge shall be into an appropriate manhole downstream from the construction. The temporary by-pass line shall be approved by City Corporation.

Manhole Stubouts:

Where it is anticipated that a sewer line is to be extended in future construction work or where required by City Corporation, one short joint of pipe shall be stubbed out from the manhole for each future connection. The size of the stubout shall be of the size pipe required for the future construction or as required by the Utility and terminating in a standard bell and with a removable water tight plug as approved by City Corporation.

Manhole Rings and Covers:

Manhole ring setting shall be set in Portland cement mortar as shown on the standard details. Tops of the manhole rings and covers shall be set four (4) to six (6) inches above planned finish grade and shall have positive back slope away from the top when finish grading is complete. In public rights-of-way the top shall be set one (1) to two (2) inches above surrounding pavements, sidewalks, or other surface areas and surfacing shall be sloped to match surrounding grade.

Manhole Steps:

Manhole steps shall be placed at locations as shown on the standard details. The first step shall be set approximately 27" down from the top of the manhole ring.

Steps shall be securely or cast in place to fully develop adequate bearing support. Distances between steps shall be as shown on the standard details but said distance shall not be greater than 15 inches.

C9 - CONCRETE AND REINFORCING STEEL

Ready-Mixed Concrete:

All concrete for poured-in-place manholes and other structural applications shall be ready-mixed concrete. Ready-mixed concrete shall conform to ASTM Standard D 94 and to applicable portions of these specifications for on-site mixing. The concrete shall be delivered and placed within one hour after all materials, including mixing water, shall have been placed in the mixing drum.

Reinforcing Steel:

Reinforcing steel shall be as specified in section M4. Steel reinforcement shall be free from rust, scale, and from mortar, dirt, or other objectionable coatings. It shall be placed accurately in accordance with details shown on the plans and properly secured in position.

Vibration:

All structural concrete must be vibrated as it is placed. The use of form vibrators is not acceptable. Internal vibrators shall be capable of transmitting vibration to the concrete at frequencies not less than 4,500 impulses per minute. Duration of vibration shall be limited to the time necessary to provide satisfactory consolidation without causing segregation. The vibrator shall not be inserted into the lower courses previously vibrated. Vibrators shall be applied in a substantially vertical position and at uniformly spaced points not further apart than the visible effectiveness of the vibrator. Vibration shall be supplemented by such spading and spudding as the Engineer may require. All concrete shall be vibrated except that the concrete in manhole bases and pipe foundations need not be vibrated if other methods produce satisfactory results.

Application of Structural Concrete Other Than Manholes:

Utilization of reinforced or unreinforced concrete for structural uses other than poured-in-place manholes shall be subject to individual design and specification of the responsible Engineer to

meet the specific needs of the project. Design and specification shall be in keeping with current engineering practice, applicable codes of practice, and subject to the review and approval of City Corporation.

C10 - PAVEMENT REPAIRS

Permanent Repairs:

Asphaltic concrete hot mix surface course construction shall meet with the current requirements of the Arkansas State Highway Department Commission Specifications for the Construction of Asphaltic Concrete Hot Mix Surface Course or as otherwise approved.

Concrete pavement repairs shall meet with the current requirements of the Arkansas State Highway Department Commission Specifications for the Construction of Concrete Rigid Pavements.

Gravel surfacing shall meet with the current requirements of the Arkansas State Highway Department Commission Specifications for the Construction of Crushed Stone Base Courses.

Prime coats shall be applied in accordance with the current requirements of the Arkansas State Highway Department Commission Specifications for the Application of Prime Coat to Crushed Stone Based Courses.

All permanent repairs of streets, roads, or other public rights-of-way shall meet with the construction requirements of the governing agency or private owner and shall meet with the requirements of all local Ordinances, Regulations, Permits, or Codes governing the repairs to roads, streets, or other public rights-of-way.

Temporary Surfacing:

Methods of temporary surfacing shall meet with the requirements of Paragraph C10 or as otherwise approved to adequately maintain traffic and proper drainage.

C11 - BACKFILL DENSITY TESTS

Requirements:

Backfill density requirements, when directed by City Corporation for a specific project as specified therein, shall be required.

Methods of Testing:

The moisture density relation of material shall be determined in the laboratory in accordance with AASHTO Designation T-180 modified to use material passing a 3/4" sieve.

Field density of backfill density shall be determined in accordance with AASHTO Designation T-147.

C12 - SEWER LINE TESTING

Sanitary Sewer Acceptance Tests:

Upon completion of the sewer system construction, acceptance tests will be conducted in the presence of a City Corporation representative to determine the acceptability of the system.

All defects in the sewers shall be repaired to the satisfaction of the Engineer.

Lamping:

Each section of the sewer line between manholes is required to be straight and uniformly graded. Each such section will be lamped by the Engineer and must show a minimum of one-half (1/2) circle of light.

Infiltration:

All newly laid pipe, after backfill, before replacing pavement, and prior to conductance of any exfiltration test shall not leak in excess of 100 gallons per inch of nominal diameter per mile of sewer per day. If the infiltration in any reach between manholes exceeds the specified allowance, the Contractor shall locate the principle leakage and shall make such repairs as are necessary to control the infiltration. The time of determining and lines to be checked shall be selected by the Engineer.

Exfiltration Test:

The Contractor shall conduct an exfiltration test on each reach of sewer between manholes. The first line between manholes shall be tested before backfilling and before any sewer pipe is installed in the remainder of the work. Thereafter, individual or multiple reaches may be tested at the option of the Contractor.

Exfiltration tests shall be conducted by blocking off all manhole openings except those connecting with the reach being tested, filling the line, and measuring the water required to maintain a constant level in the manholes. Each manhole shall be subject to at least one exfiltration test. During the exfiltration test, the minimum water depth above the pipe invert shall be ten (10) feet.

When existing sewer service lines or septic tank drainfield lines are encountered during trenching operations, such service lines shall be maintained in service, or if accidentally broken, shall be repaired.

Reaches of sewer in which sewer service lines are encountered between manholes shall be completed, including manholes, and the exfiltration test acceptably completed, prior to connecting such service lines. Tee branches shall be plugged as specified herein, or may be fitted with a temporary pipe riser, extended above the gradient at which exfiltration testing will be done.

The total exfiltration shall not exceed 100 gallons per inch of nominal diameter per mile of pipe per day for each reach tested. For purposes of determining maximum allowable leakage, manholes shall be considered sections of 48 inch pipe. The exfiltration tests shall be maintained on each reach for at least two (2) hours and as much longer as necessary, in the opinion of City Corporation, to locate all leaks.

The Contractor shall provide, at his own expense, all necessary piping between the reach to be tested and the source of water supply, together with equipment and materials required for the tests. The methods used and the time of conducting exfiltration tests shall be acceptable to City Corporation.

If leakage in any reach exceeds the allowable maximum, it shall be retested after the leaks are repaired.

Air testing may be used as a substitution for exfiltration testing for sewer pipe. Methods of air testing shall be submitted to City Corporation for review and approval before testing is started.

The time required for the internal air pressure to drop from 3 1/2 to 3 psi between manholes within various pipe sizes shall not be less than the values shown on the following table.

**SPECIFICATION TIME REQUIRED FOR A 0.5 PSIG PRESSURE DROP
FOR SIZE AND LENGTH OF PIPE INDICATED FOR Q = 0.0015**

1 Pipe Diameter (in.)	2 Minimum Time (min: sec)	3 Length for Minimum Time (ft)	4 Time for Longer Length (sec)	Specification Time for Length (L) Shown (min:sec)							
				100 ft	150 ft	200 ft	250 ft	300 ft	350 ft	400 ft	450 ft
4	1:53	597	.190 L	1:53	1:53	1:53	1:53	1:53	1:53	1:53	1:53
6	2:50	398	.427 L	2:50	2:50	2:50	2:50	2:50	2:50	2:51	3:12
8	3:47	298	.760 L	3:47	3:47	3:47	3:47	3:48	4:26	5:04	5:42
10	4:43	239	1.187 L	4:43	4:43	4:43	4:57	5:56	6:55	7:54	8:54
12	5:40	199	1.709 L	5:40	5:40	5:42	7:08	8:33	9:58	11:24	12:50
15	7:05	159	2.671 L	7:05	7:05	8:54	11:08	13:21	15:35	17:48	20:02
18	8:30	133	3.846 L	8:30	9:37	12:49	16:01	19:14	22:26	25:38	28:51
21	9:55	114	5.235 L	9:55	13:05	17:27	21:49	26:11	30:32	34:54	39:16
24	11:20	99	6.837 L	11:24	17:57	22:48	28:30	34:11	39:53	45:35	51:17
27	12:45	88	8.653 L	14:25	21:38	28:51	36:04	43:16	50:30	57:42	64:54
30	14:10	80	10.683 L	17:48	26:43	35:37	44:31	53:25	62:19	71:13	80:07
33	15:35	72	12.926 L	21:33	32:19	43:56	53:52	64:38	75:24	86:10	96:57
36	17:00	66	15.384 L	25:39	38:28	51:17	64:06	76:55	89:44	102:34	115:23

(Table Courtesy of Uni-Bell PVC Pipe Association)

If the time required is less than the values shown, the sewer shall be considered to show significant leakage and necessary repairs shall be made until the time required for the pressure drop equals or is greater than the values shown.

If air testing is utilized as a substitute for exfiltration testing for sewer pipe, manholes shall still be tested by a vacuum test performed as follows:

A vacuum of 10" Hg shall be placed on the manhole, and the time measured for the vacuum to drop to 9" Hg shall not be less than 60 seconds.

Deflection Test:

After the pipe has been laid and backfilled, the contractor shall perform a deflection test on all PVC sewer pipe. This test shall consist of pulling a mandrill through the pipe with a maximum allowable deflection of 5%.

Safety Provisions for Air Testing:

Plugs used to close the sewer pipe for the air test must be securely braced to prevent the unintentional release of a plug which can become a high velocity projectile. Gauges, air piping manifolds, and valves shall be located at the top of the ground. No one shall be permitted to enter a manhole where a plugged pipe is under pressure. Four pounds (gauge) air pressure develops a force against the plug in a 12" diameter pipe of approximately 450 pounds. Pipes larger than 24" in diameter shall not be air tested because of the difficulty of adequately blocking the plugs.

Force Main Leakage Tests:

Leakage tests for force mains shall be made by filling the force main with water and increasing the pressure to testing pressure of 150% of working pressure.

The duration of the leakage per hour for cast iron, ductile iron, PVC, or concrete pipe shall be calculated by the following formulas:

All rubber gasket or o-ring joints (cast iron and concrete) -

$$L = \frac{ND \sqrt{P}}{7400}$$

L = Allowable Leakage (gallons per hour)
N = Number of Joints in Pipeline Tested
D = Nominal Diameter (inches)
P = Test Pressure (psi)

The force main will not be accepted until the actual leakage is equal to or less than the allowable. In addition, all obvious leaks shall be required.

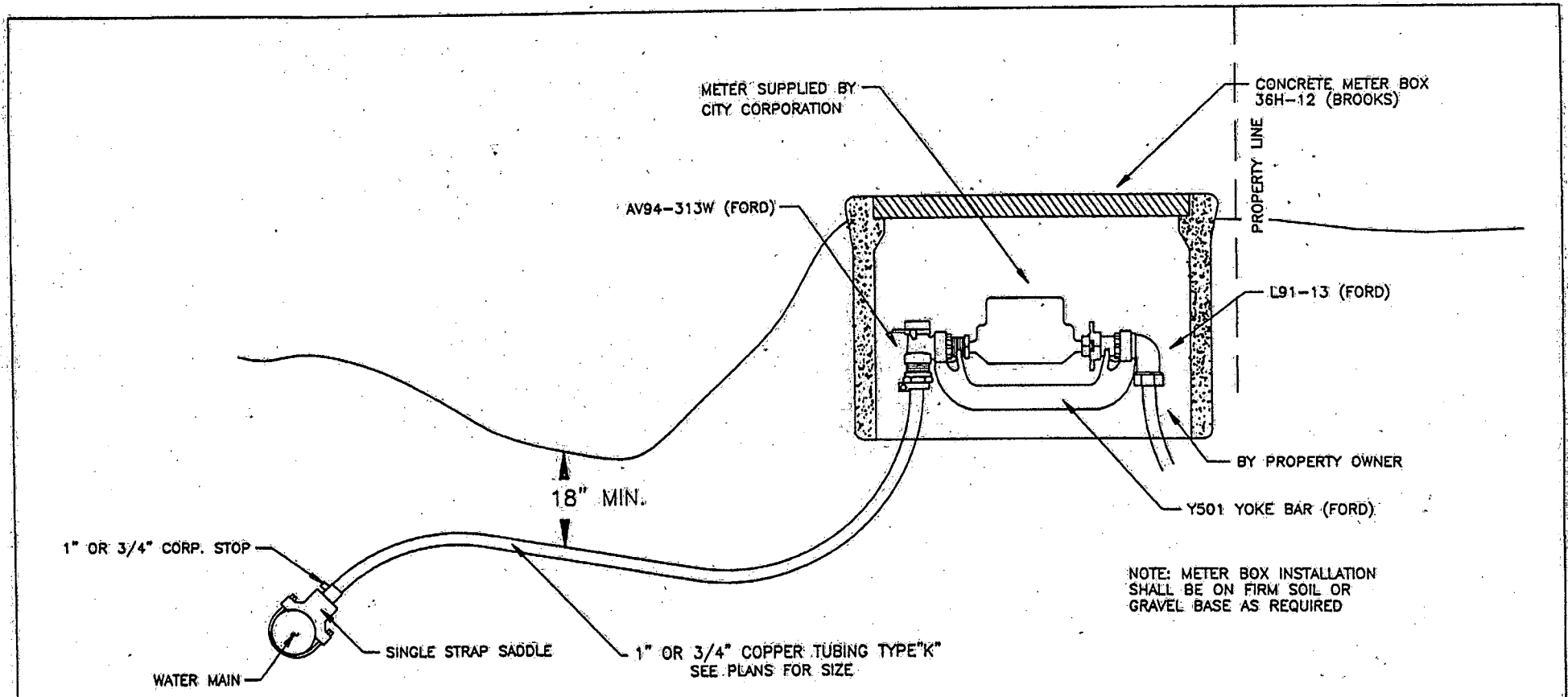
Leaks Encountered in Final Inspection:

In addition to passing the above described leakage tests, all obvious running leaks which may be observed in the final inspection shall be satisfactorily repaired.

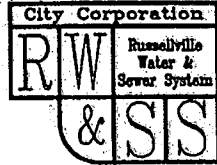
Pipe Deflection Testing:

City Corporation reserves the right to mandrel test any sewer pipe before acceptance, and also prior to expiration of the first year of operation. If a previously accepted line fails a mandrel test performed during the first year of operation, the defects must be corrected at the contractor's expense.





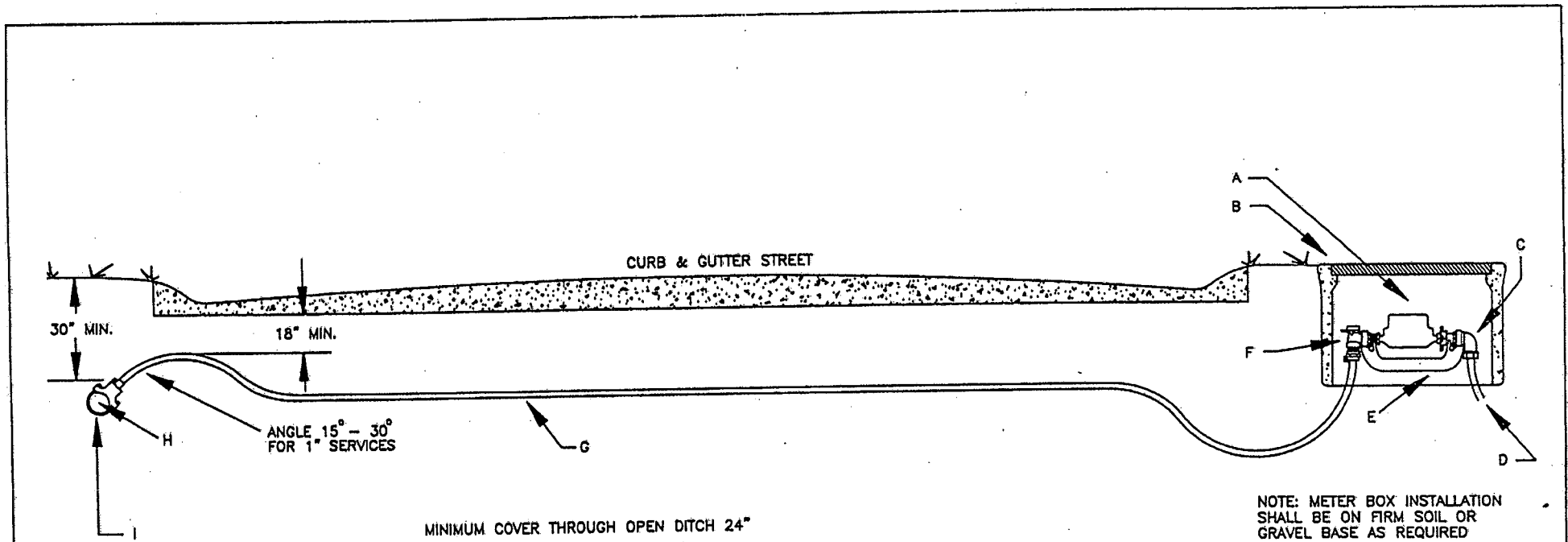
NOTE: METER BOX INSTALLATION SHALL BE ON FIRM SOIL OR GRAVEL BASE AS REQUIRED




POST OFFICE BOX 458 205 WEST 3RD PLACE
 PHONE 968-2105
 RUSSELLVILLE, ARKANSAS 72801

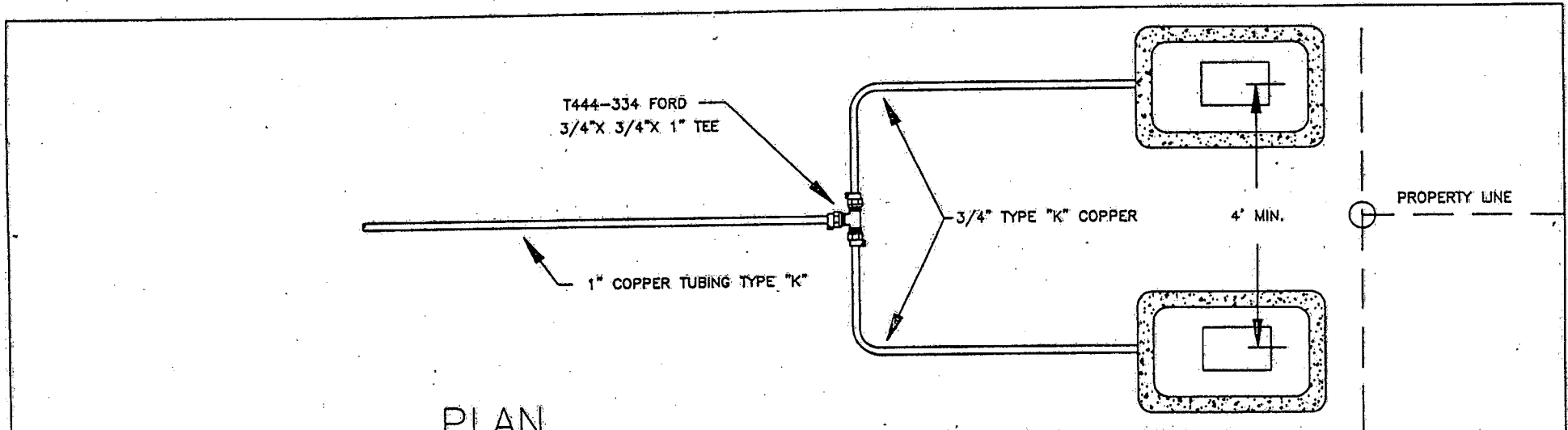
"SHORT SIDE"
 WATER SERVICE DETAIL

W-1	Approved:	Scale: NONE
		Date: MAR '95

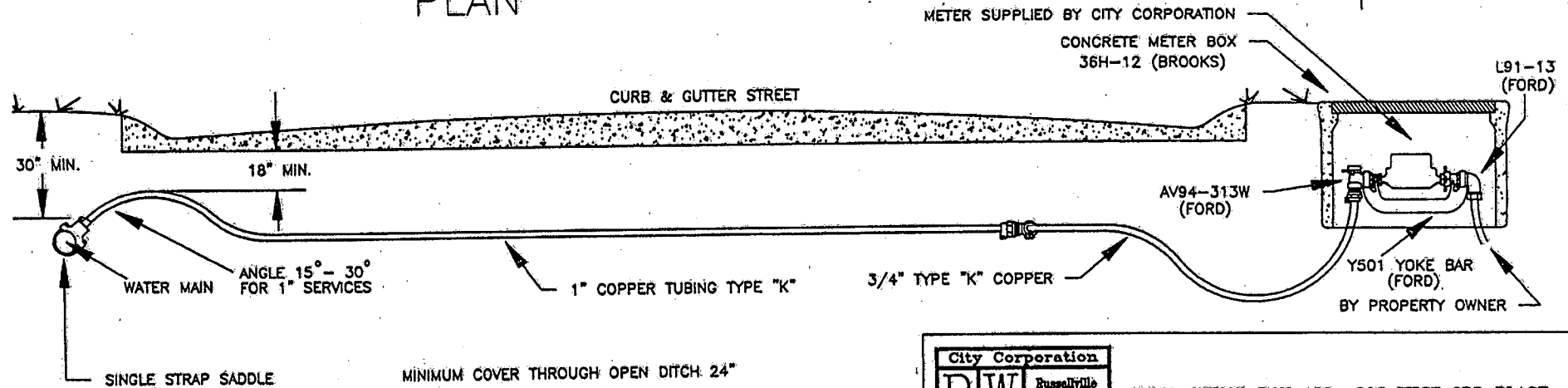


- A METER SUPPLIED BY CITY CORPORATION
- B 36H-12 (BROOKS)
- C L91-13 (FORD)
- D BY PROPERTY OWNER
- E Y501 YOKE BAR (FORD)
- F AV94-313W (FORD)
- G 1" OR 3/4" COPPER TUBING TYPE "K"
- H SINGLE STRAP SADDLE
- I WATER MAIN

		POST OFFICE BOX 458 205 WEST 3RD PLACE PHONE 968-2105 RUSSELLVILLE, ARKANSAS 72801
<h3>"LONG SIDE" WATER SERVICE DETAIL</h3>		
W-2	Approved: _____	Scale: NONE Date: MAR '95



PLAN



ELEVATION

NOTE: METER BOX INSTALLATION
SHALL BE ON FIRM SOIL OR
GRAVEL BASE AS REQUIRED



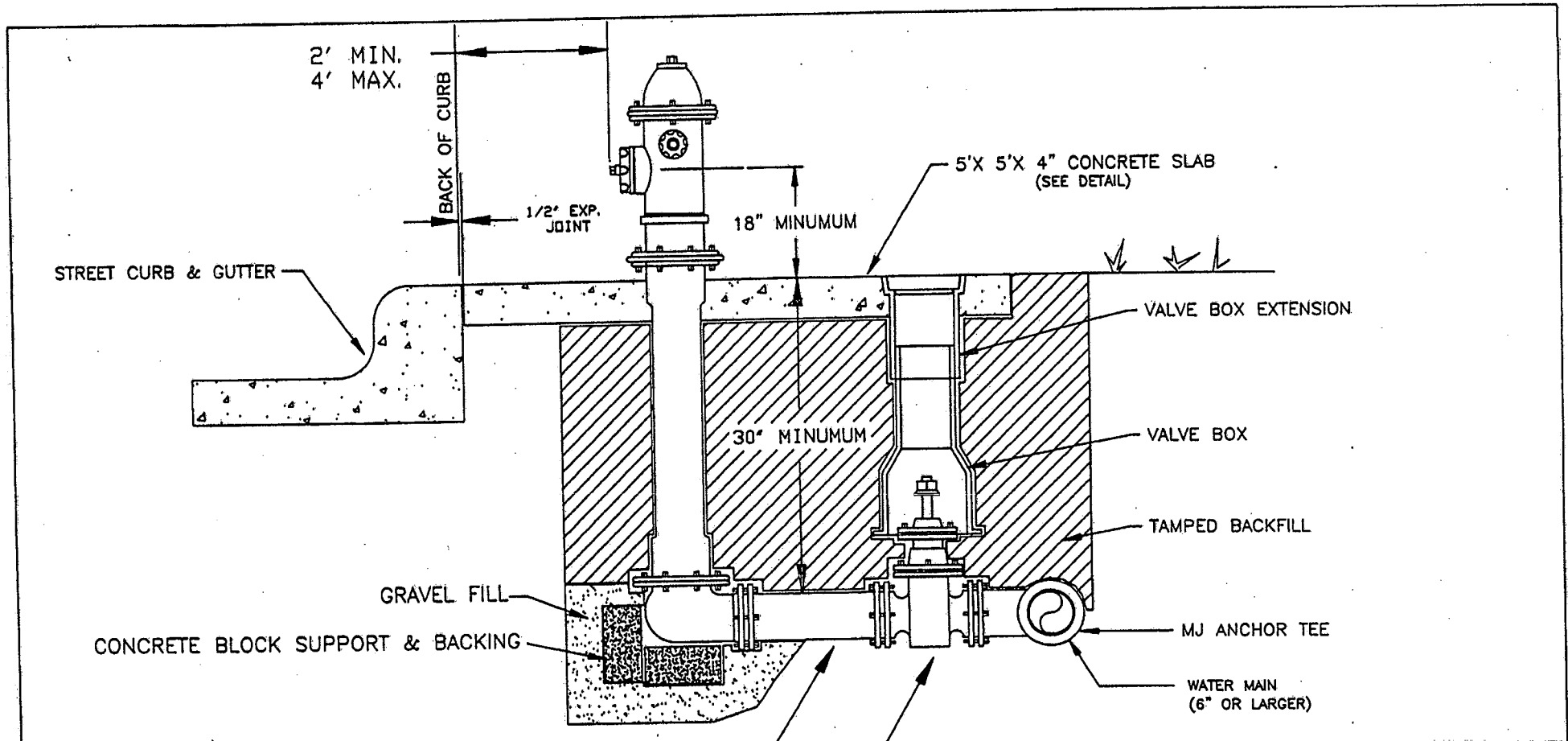
POST OFFICE BOX 458 205 WEST 3RD PLACE
PHONE 968-2105
RUSSELLVILLE, ARKANSAS 72801

"LONG SIDE"
WATER SERVICE DETAIL
TWO SERVICES "BULL-HEADED"

W-3

Approved:

Scale: NONE
Date: MAR '95



2' MIN.
4' MAX.

BACK OF CURB

1/2" EXP. JOINT

18" MINIMUM

5' X 5' X 4" CONCRETE SLAB
(SEE DETAIL)

STREET CURB & GUTTER

VALVE BOX EXTENSION

30" MINIMUM

VALVE BOX

TAMPED BACKFILL

GRAVEL FILL

CONCRETE BLOCK SUPPORT & BACKING

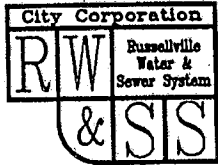
MJ ANCHOR TEE

WATER MAIN
(6" OR LARGER)

17" SWIVEL ADAPTER *

* IF HYDRANT LEAD MUST BE LONGER THAN 17", USE 6" DI NIPPLE
W/ MJ RETAINER GLANDS - MUST BE PRESSURE TESTED.

6" GATE VALVE



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RUSSELLVILLE, ARKANSAS 72801

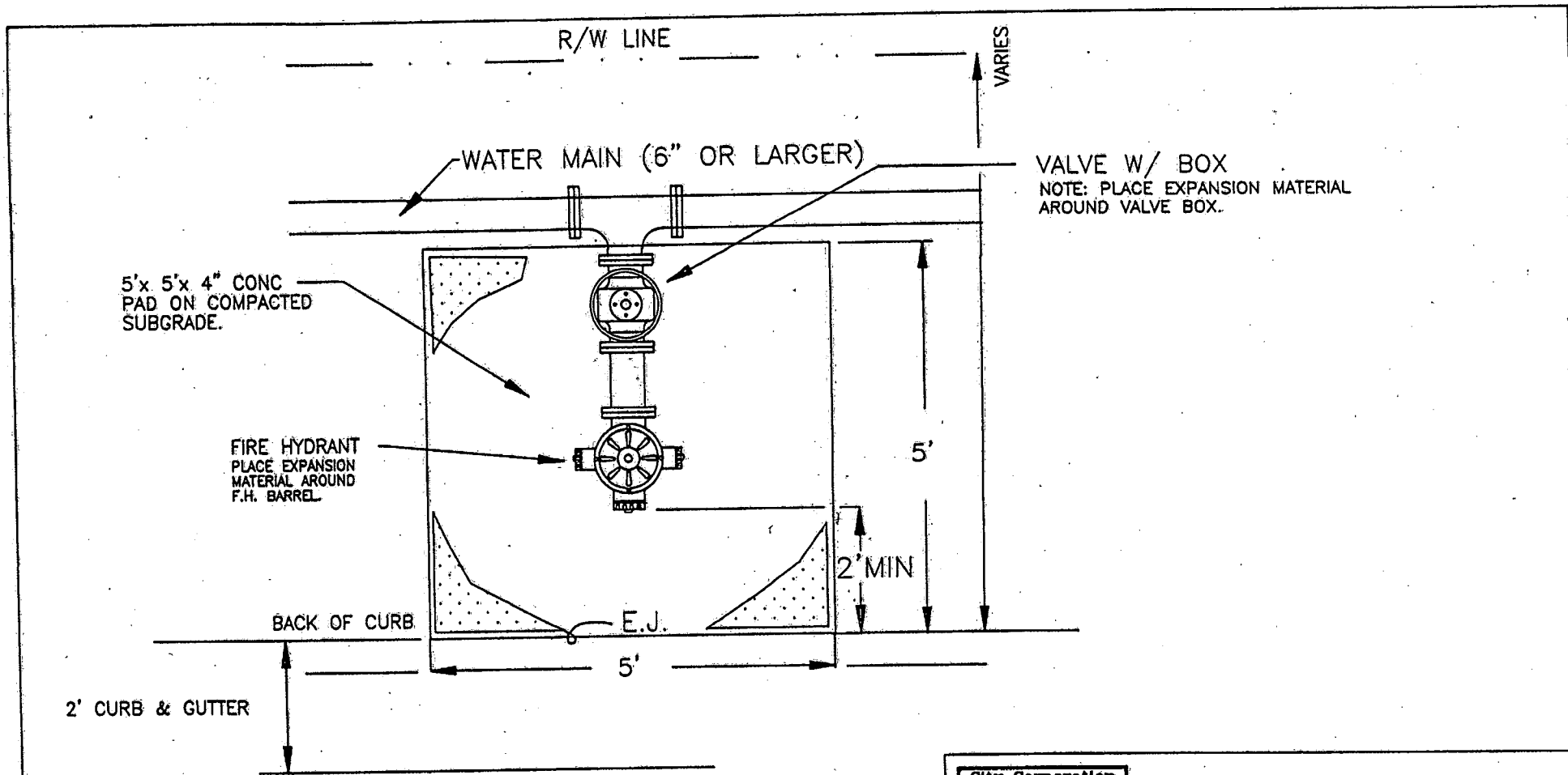
FIRE HYDRANT ASSEMBLY & GATE VALVE DETAIL

W-4

Approved:


Scale: NONE

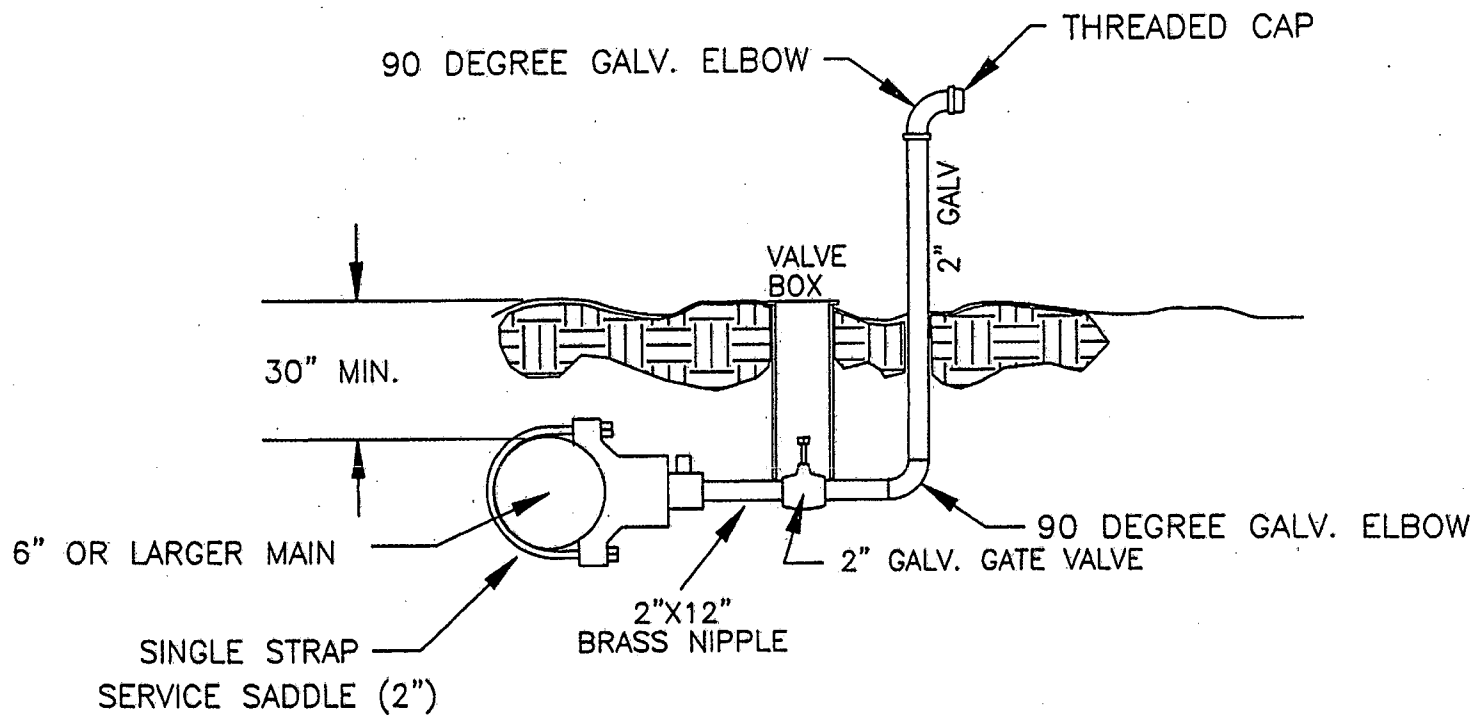
Date: MAR '95



(CITY OF RUSSELLVILLE REQUIREMENT FOR ALL)
FIRE HYDRANT INSTALLATIONS.

NOTE: FIRE HYDRANT SETTINGS ON SITES NOT ADJACENT
TO CURB & GUTTER STREET REQUIRE INDIVIDUAL DESIGN.

		POST OFFICE BOX 458 205 WEST 3RD PLACE PHONE 968-2105 RUSSELLVILLE, ARKANSAS 72801
FIRE HYDRANT CONCRETE PAD DETAIL		
W-5	Approved:	Scale: NONE Date: MAR '95



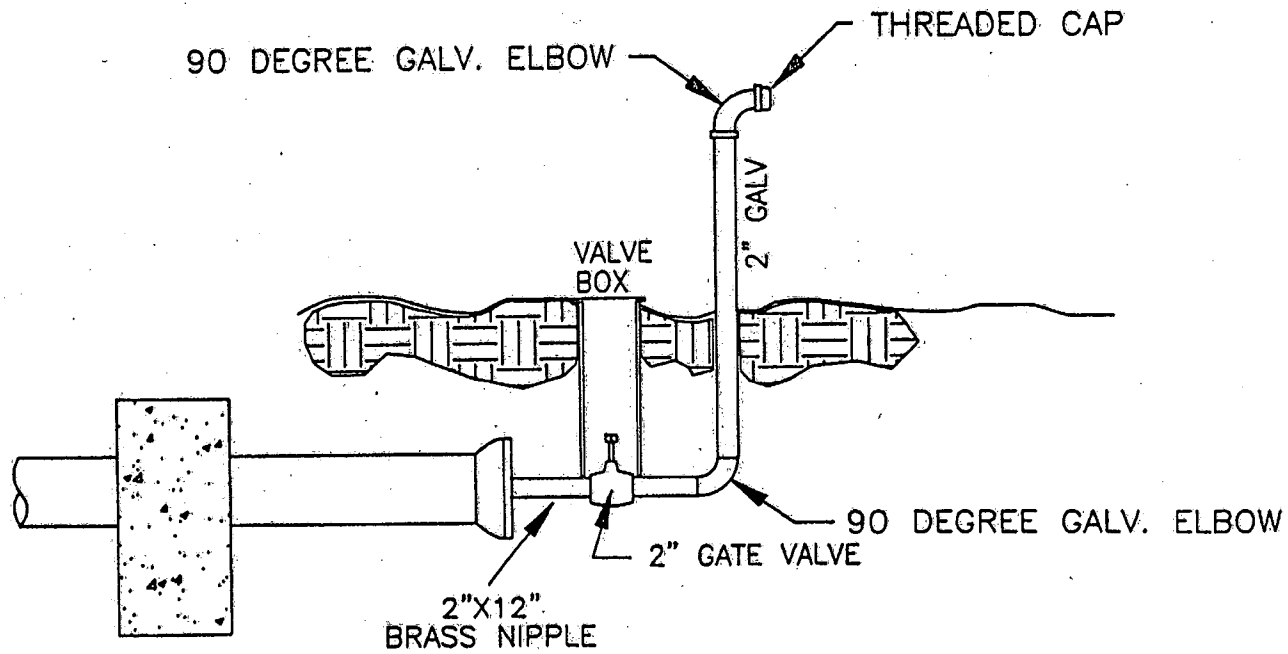
City Corporation
 POST OFFICE BOX 458 205 WEST 3RD PLACE
 PHONE 968-2105
 RUSSELLVILLE, ARKANSAS 72801

SIDE OUTLET 2" BLOW-OFF DETAIL

W-6

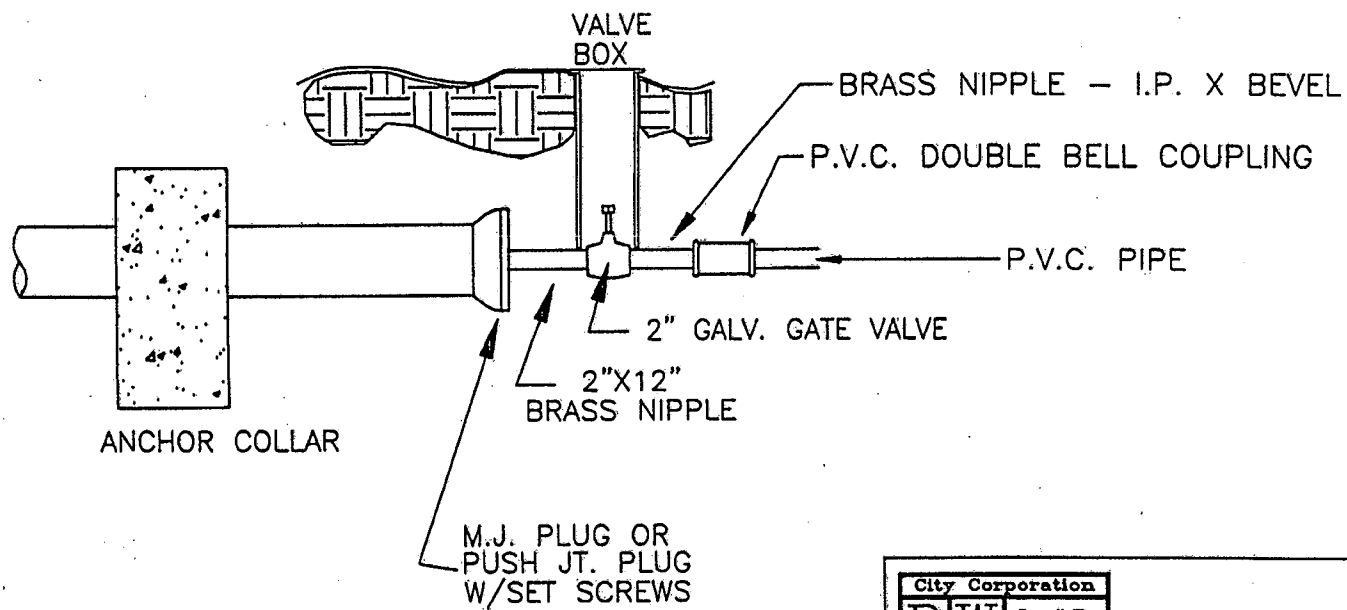
Approved:

Scale: NONE
 Date: MAR '95



	City Corporation Russellville Water & Sewer System	POST OFFICE BOX 458 205 WEST 3RD PLACE PHONE 988-2105 RUSSELLVILLE, ARKANSAS 72801
	END OUTLET 2" BLOW-OFF DETAIL	

W-7	Approved:	Scale: NONE Date: MAR '95
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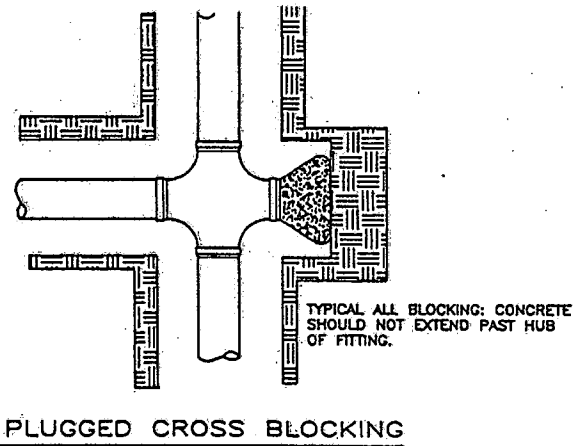
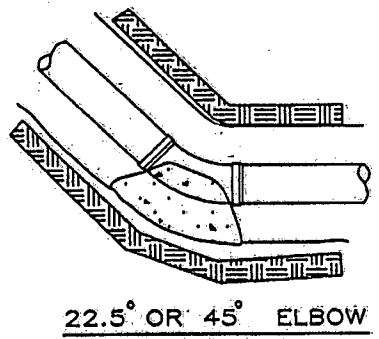
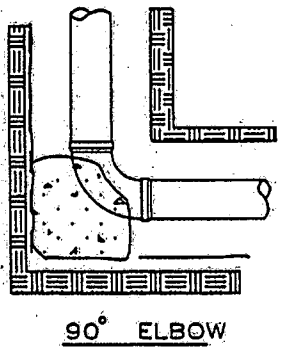
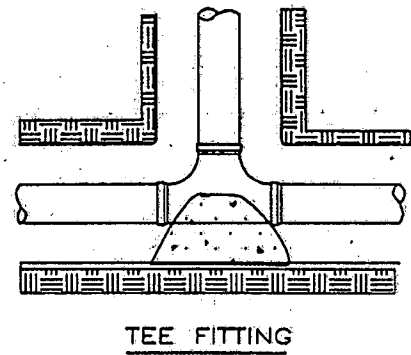
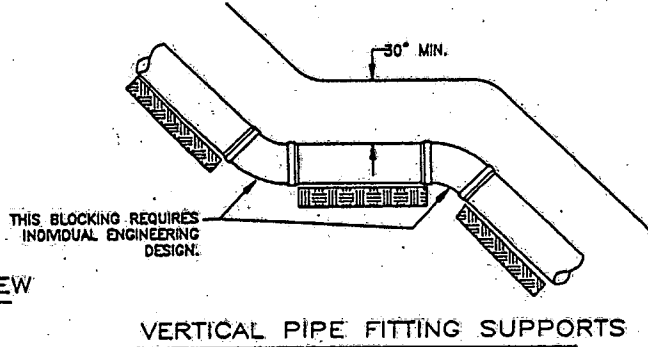
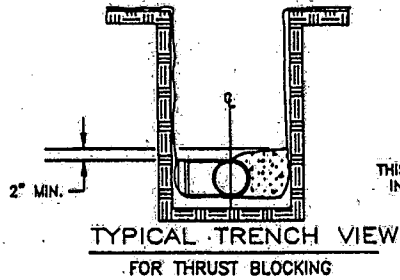
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 PHONE 988-2105
 RUSSELLVILLE, ARKANSAS 72801

2" PVC CONNECTION TO 6" OR LARGER MAIN

W-8

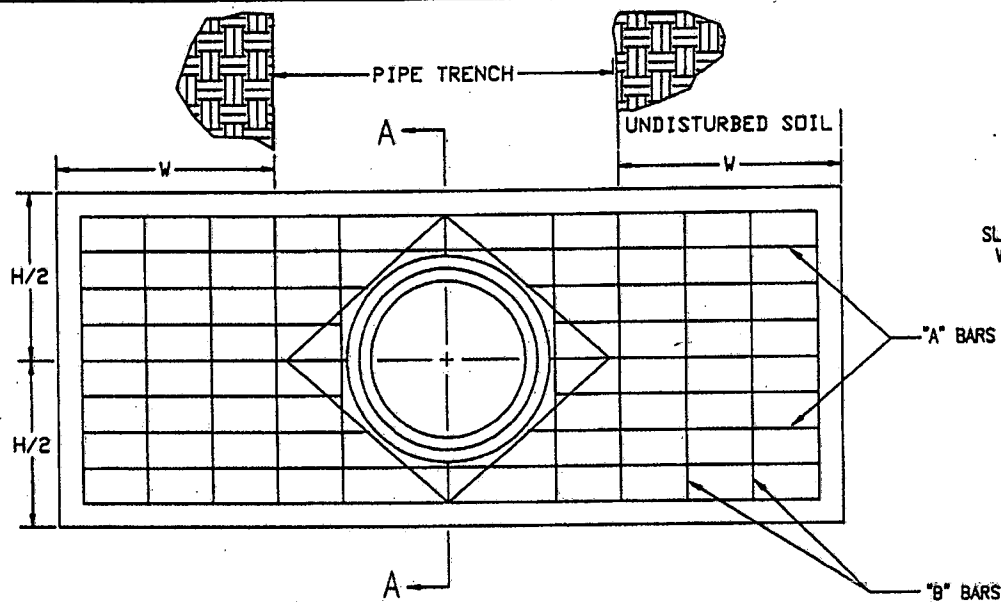
Approved:

Scale: NONE
 Date: MAR '95



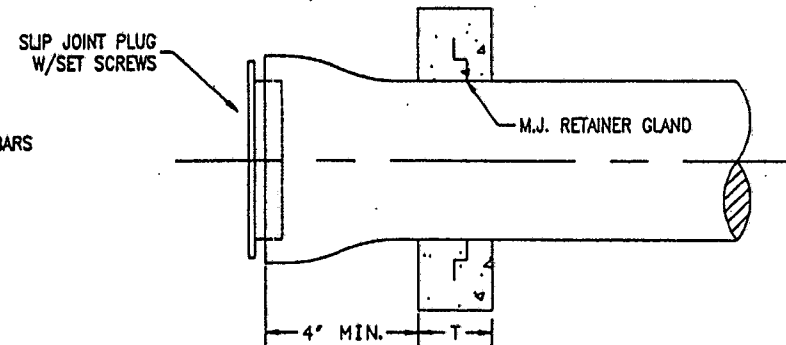
NOTE: ALL CONCRETE THRUST
BLOCKING SHALL BE AGAINST
UNDISTURBED SOIL. SEE SPECS
FOR MINIMUM BEARING AREA.

	POST OFFICE BOX 458 205 WEST 3RD PLACE PHONE 988-2105 RUSSELLVILLE, ARKANSAS 72801	
	THRUST BLOCKING DETAILS	
W-9	Approved:	Scale: NONE Date: MAR '95



ELEVATION - ANCHOR COLLAR

NOTE: PIPE SURFACES SHALL BE
CLEANED OF ALL FOREIGN MATERIAL
BEFORE CONCRETE COLLAR
IS POURED



SECTION A-A

ANCHOR COLLAR SCHEDULE						
SIZE PIPES	DIMENSIONS			REINFORCING BARS		
	W	H	T	M	"A" BARS	"B" BARS
6"	1.5'	2'	1'	M.J. RETAINER GLAND	#6 @ 6"	#6 @ 6"
8"	1.5'	2.5'	1'	M.J. RETAINER GLAND	#6 @ 6"	#6 @ 6"
12"	2'	4'	1.5'	M.J. RETAINER GLAND	#6 @ 6"	#6 @ 6"
16"	3'	4.5'	1.5'	M.J. RETAINER GLAND	#6 @ 6"	#6 @ 6"
20"	3'	5'	2'	M.J. RETAINER GLAND	#6 @ 6"	#6 @ 6"
24"	3.5'	5.5'	2'	M.J. RETAINER GLAND	#7 @ 6"	#6 @ 10"



City Corporation
Russellville
Water &
Sewer System
POST OFFICE BOX 458 205 WEST 3RD PLACE
PHONE 968-2105
RUSSELLVILLE, ARKANSAS 72801

ANCHOR COLLAR ON DUCTILE IRON PIPE

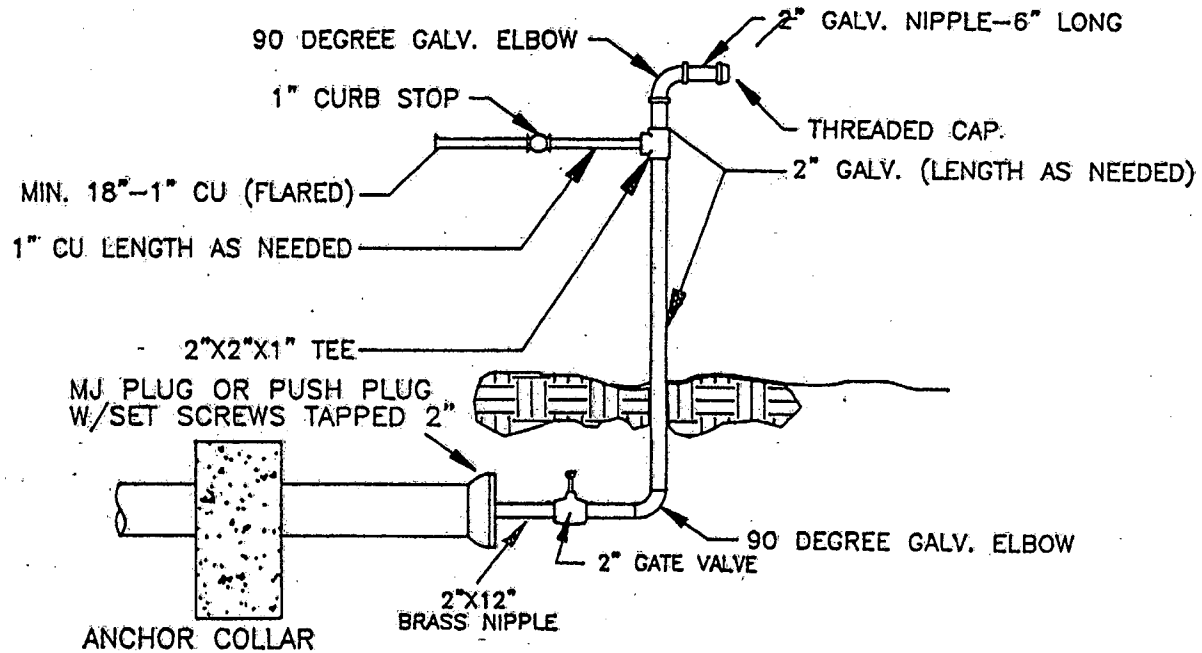
W-10

Approved

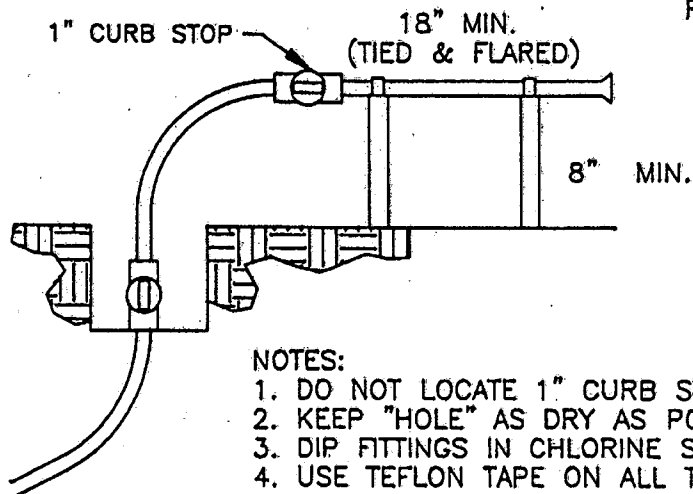
Scale None

Date APR '95

2" BLOW OFF



1" BLOW OFF



FOR NEW CONSTRUCTION ONLY—LOCATE WHERE SHOWN ON PLANS

NOTES:

1. DO NOT LOCATE 1" CURB STOP OVER "HOLE"
2. KEEP "HOLE" AS DRY AS POSSIBLE
3. DIP FITTINGS IN CHLORINE SOLUTION
4. USE TEFLON TAPE ON ALL THREADED JOINTS



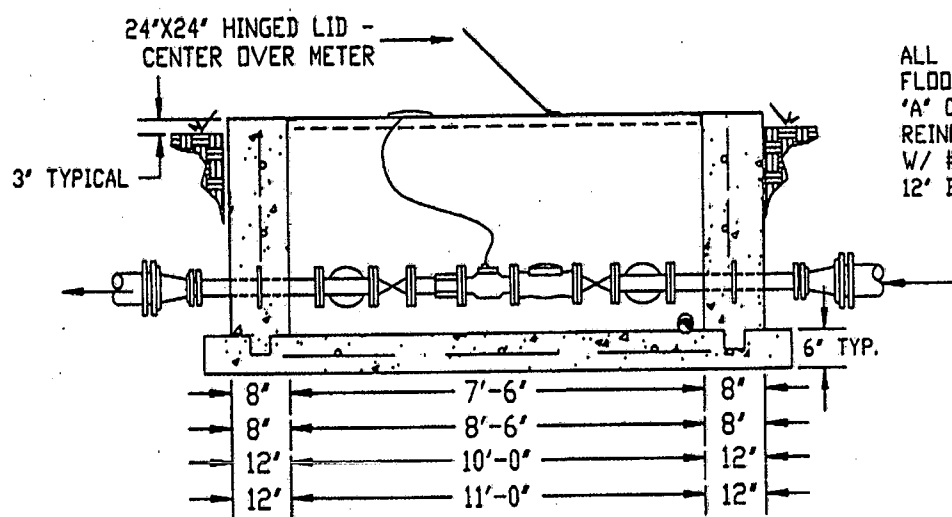
City Corporation
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 PHONE 988-2105
 RUSSELLVILLE, ARKANSAS 72801

BACTERIOLOGICAL SAMPLING STATION DETAIL

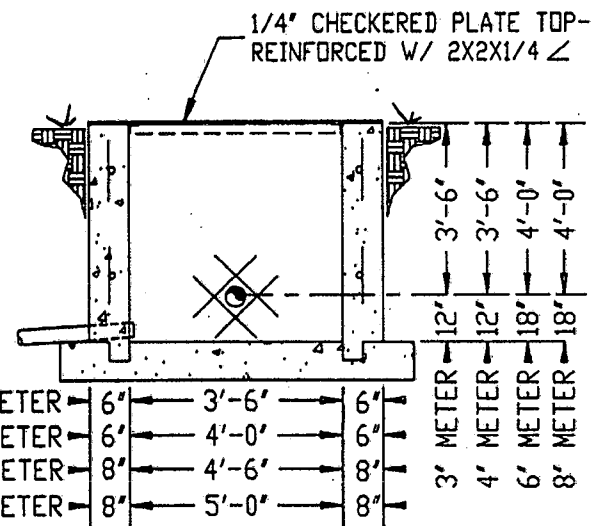
W-11

Approved:

Scale: NONE
 Date: MAY '95



ALL WALLS & FLOORS CLASS 'A' CONCRETE REINFORCED W/ #4'S & 12" B.W.



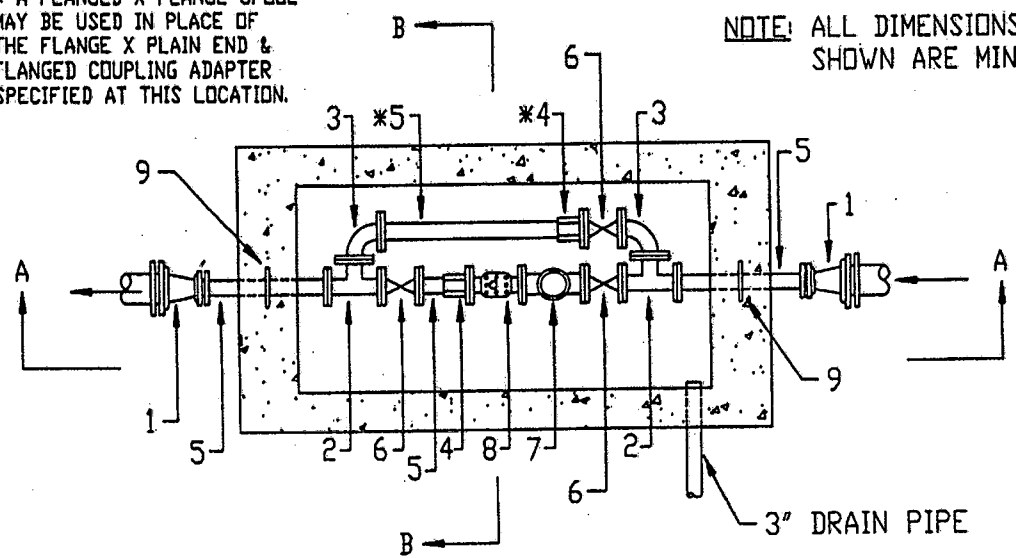
SECTION A-A

SECTION B-B

* A FLANGED X FLANGE SPOOL MAY BE USED IN PLACE OF THE FLANGE X PLAIN END & FLANGED COUPLING ADAPTER SPECIFIED AT THIS LOCATION.

NOTE: ALL DIMENSIONS SHOWN ARE MINIMUMS.

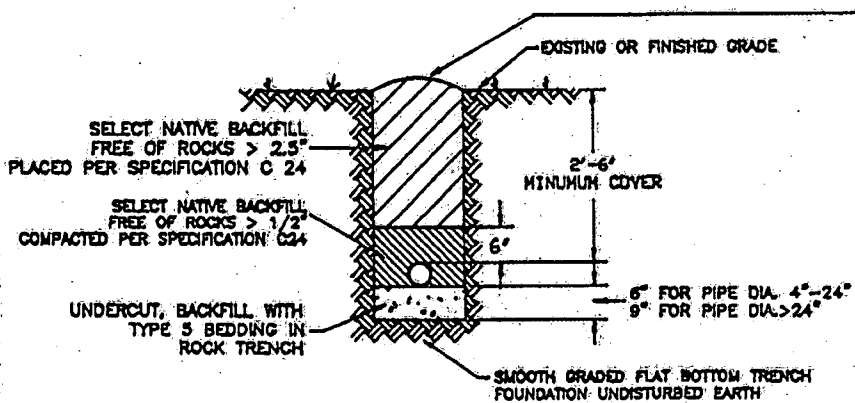
ALL FITTINGS CAST OR DUCTILE IRON
ALL FITTING SIZES TO MATCH METER FLANGE



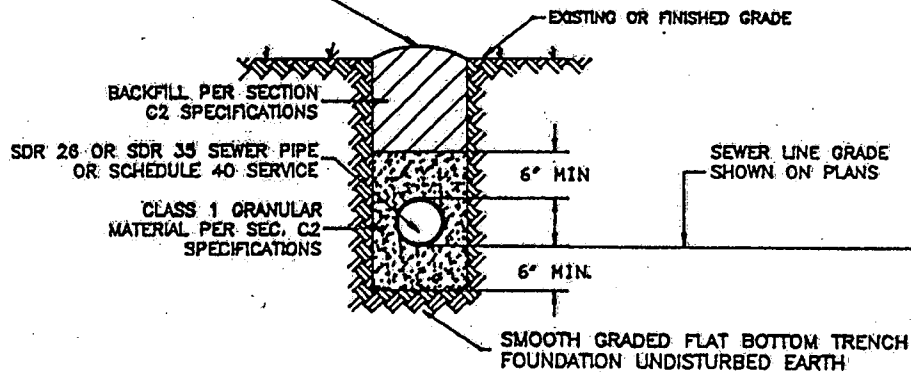
1. REDUCER, M.J. X M.J.
2. TEE, FLANGED
3. 90 ELBOW, FLANGED
4. FLANGED COUPLING ADAPTER
5. D.I.P., FLANGED TO PLAIN END
6. GATE VALVE, FLANGED, HAND WHEEL OPERATED
7. STRAINER, FLANGED (SEE SPECS.)
8. PRO-READ TURBO METER, FLANGED (SEE SPECS.)
9. M.J. RETAINER GLAND

	POST OFFICE BOX 458 205 WEST 3RD PLACE PHONE 968-2105 RUSSELLVILLE, ARKANSAS 72801
	METER STATION 3"-4"-6"-8" METERS
W-12	Approved: _____ Date: JUNE 95

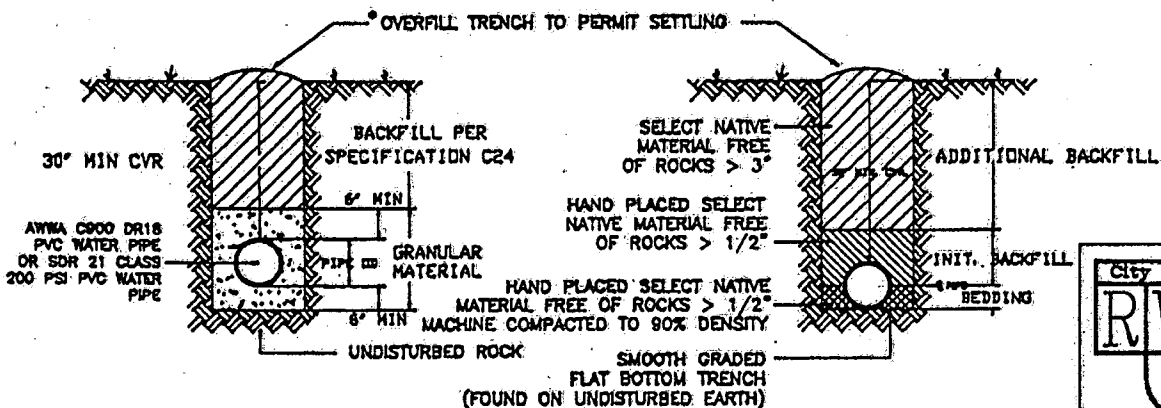
OVERFILL TRENCH TO PERMIT SETTLING



TRENCH & BACKFILL DETAIL
DUCTILE IRON PIPE FOR WATER MAINS



TRENCH & BACKFILL DETAIL
6" & LARGER SDR 28 SEWER MAIN
4" SCHEDULE 40 OR SDR 35 SEWER SERVICE LINE



TYPE 5 BEDDING
TRENCH & BACKFILL DETAIL
4"-12" DIA C800 DR18 PVC WATER MAIN
2"-3" DIA SDR21 PVC WATER MAIN
(FOR INSTALLATION WHERE ROCK IS ENCOUNTERED IN TRENCH)

TRENCH & BACKFILL DETAIL
C-900 DR18 PVC WATER PIPE
SDR 21 CLASS 200 PVC WATER PIPE

*ALL TRENCH BACKFILL IN STREET RIGHT-OF-WAYS
SHALL BE COMPACTED IN 6" LAYERS TO 90% MODIFIED PROCTOR DENSITY



City Corporation
POST OFFICE BOX 458 205 WEST 3RD PLACE
PHONE 988-2105
RUSSELLVILLE, ARKANSAS 72801

TYPICAL PIPE BEDDING & BACKFILL

WS-1

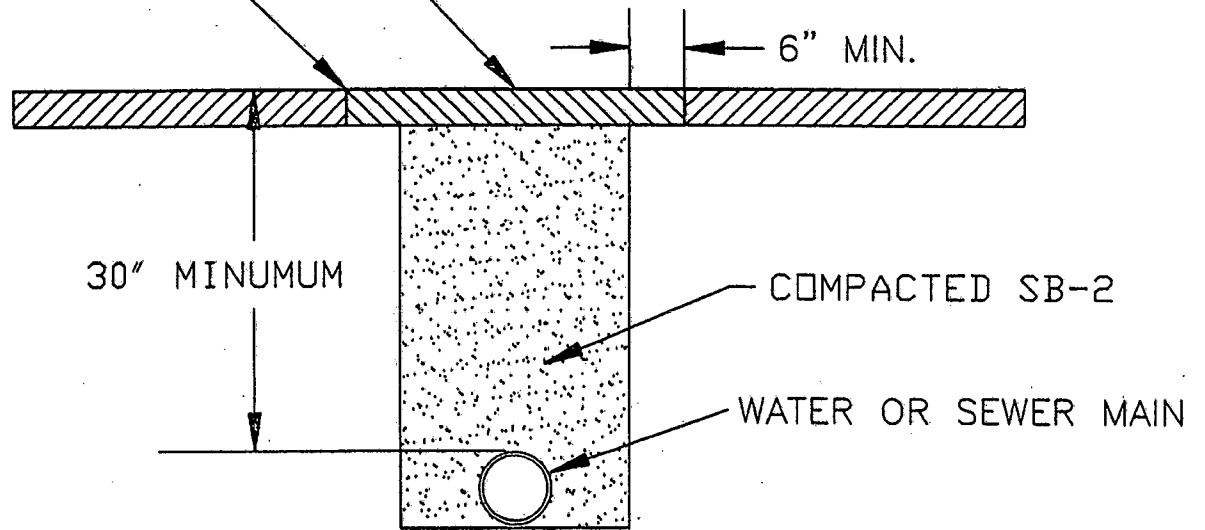
Approved:

Scale: NONE

Date: MAY '95

REPLACE WITH APPROVED MATERIAL
AT THICKNESS EQUAL TO EX. PAVEMENT

SAWCUT ASPHALTIC PAVEMENT



(OTHER THAN STATE HIGHWAY)



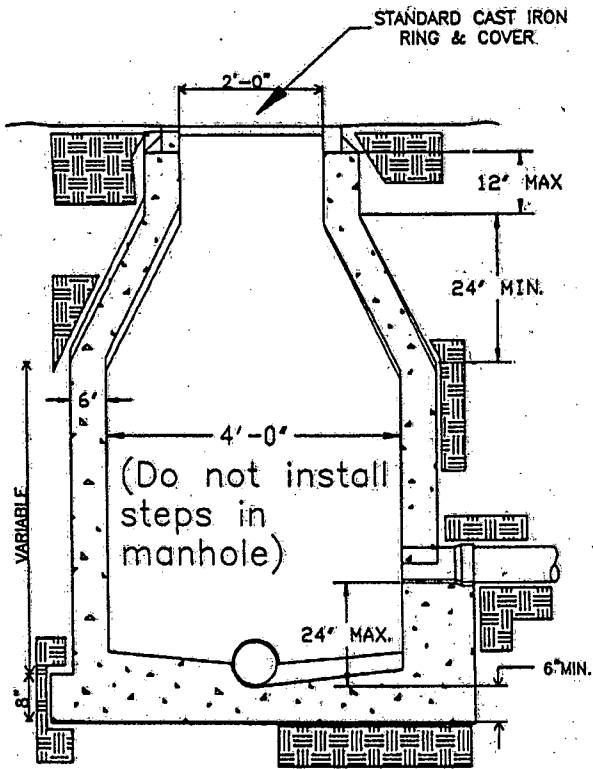
City Corporation
Russellville
Water &
Sewer System
POST OFFICE BOX 458 205 WEST 3RD PLACE
PHONE 968-2105
RUSSELLVILLE, ARKANSAS 72801

ASPHALTIC ROAD CROSSING DETAIL

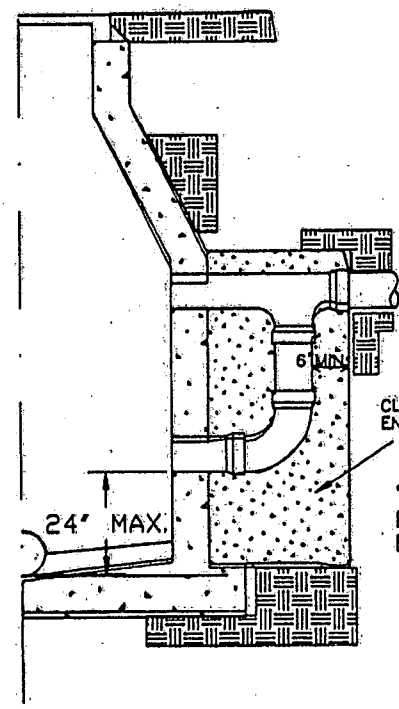
WS-2

Approved:

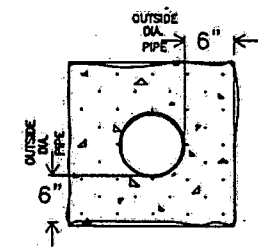
Scale: NONE
Date: R '95



STANDARD MANHOLE



DROP MANHOLE



CONCRETE ENCASEMENT

CLASS "B" CONCRETE ENCASEMENT

"TO BE USED WHERE DIFFERENCE IN FLOW LINE ELEVATION OF INTERSECTING LINES EQUALS OR EXCEEDS 24 INCHES"

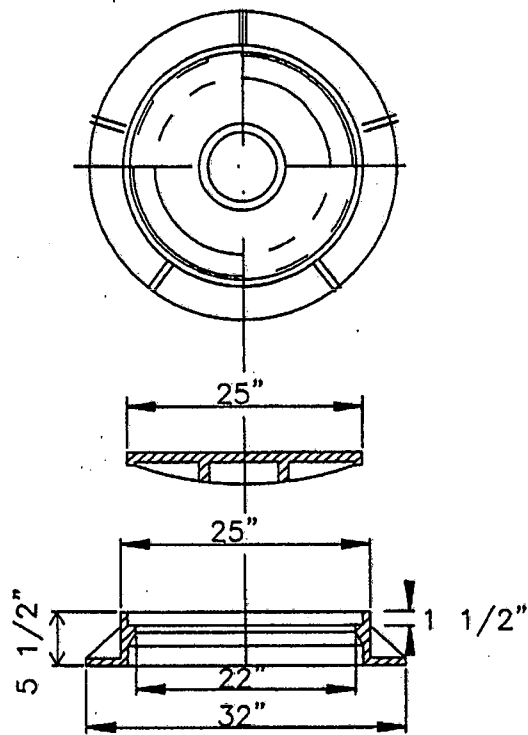
Manholes shall be constructed of monolithically poured Class "A", or Precast wall sections on a Class "A" concrete base slab. Manholes shall be pressure tested to prove water tightness



POST OFFICE BOX 458 205 WEST 3RD PLACE
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MANHOLE SECTIONS & DETAILS

S-1	Approved:	Scale: NONE
		Date: MAR '95



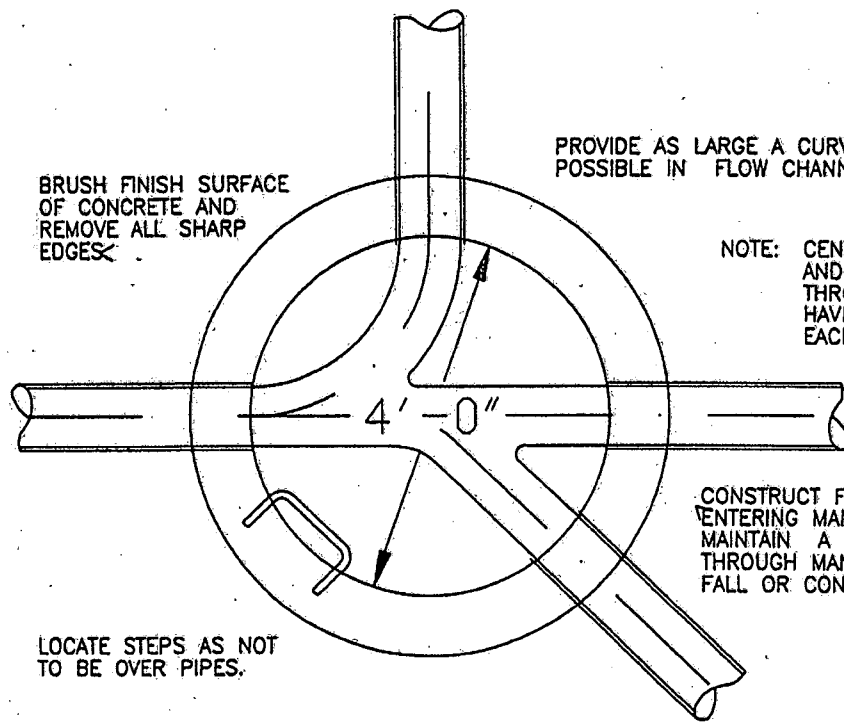
NOTE: MINIMUM WEIGHTS
 COVER 125 LBS.
 RING 135 LBS
 COMBINED WEIGHT 260 LBS.



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MANHOLE RING & COVER DETAIL

S-2	Approved:	Scale: NONE Date: MAR '95
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BRUSH FINISH SURFACE OF CONCRETE AND REMOVE ALL SHARP EDGES.


PROVIDE AS LARGE A CURVE AS POSSIBLE IN FLOW CHANNEL.

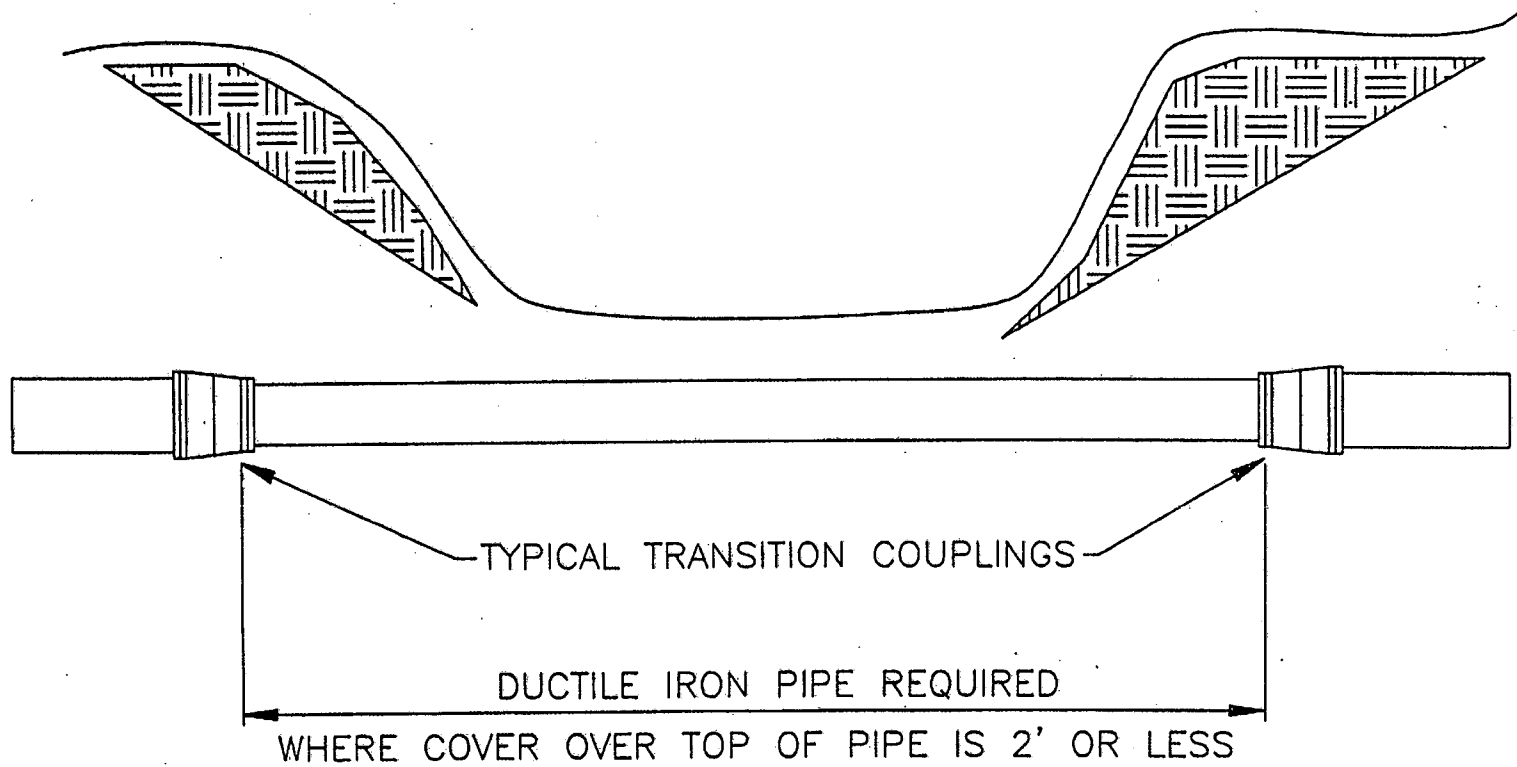
NOTE: CENTERLINE OF ALL PIPES ENTERING AND EXITING MANHOLE SHALL PASS THROUGH CENTER OF MANHOLE AND HAVE A FLOW LINE PROVIDED FOR EACH PIPE.

CONSTRUCT FLOW CHANNEL FOR ALL PIPES ENTERING MANHOLE, INCLUDING SERVICES. MAINTAIN A CONSTANT HYDRAULIC GRADE THROUGH MANHOLE WITH A MINIMUM OF 0.2' FALL OR CONTINUOUS RUN OF PIPE.

LOCATE STEPS AS NOT TO BE OVER PIPES.

(MANHOLES FOR SEWERS LARGER THAN 24" REQUIRE INDIVIDUAL DESIGN)

		City Corporation Russellville Water & Sewer System		POST OFFICE BOX 458 205 WEST 3RD PLACE PHONE 968-2105 RUSSELLVILLE, ARKANSAS 72801	
MANHOLE BOTTOM DETAIL FOR 6" THROUGH 24" SEWERS					
S-3		Approved:		Scale: NONE Date: MAR '95	



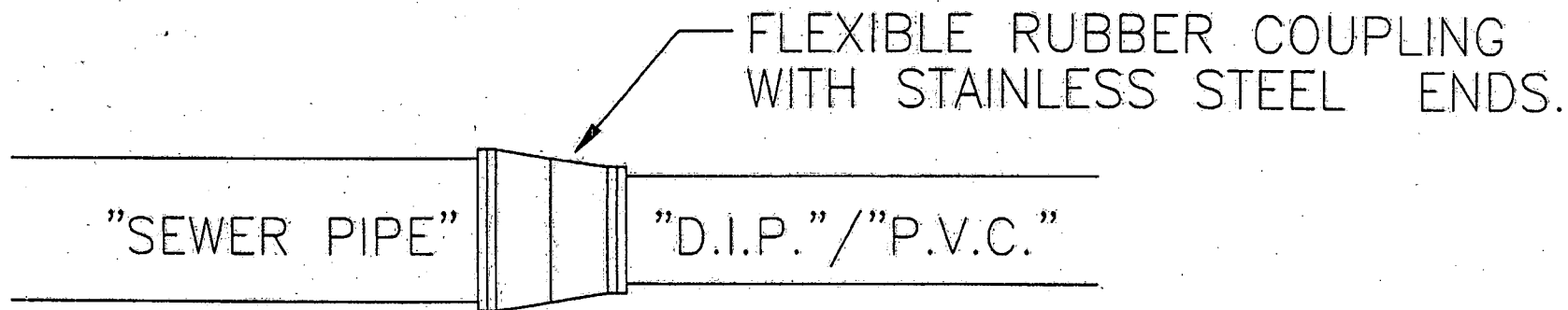
POST OFFICE BOX 458 205 WEST 3RD PLACE
PHONE 968-2105
RUSSELLVILLE, ARKANSAS 72801

BURIED CREEK CROSSING

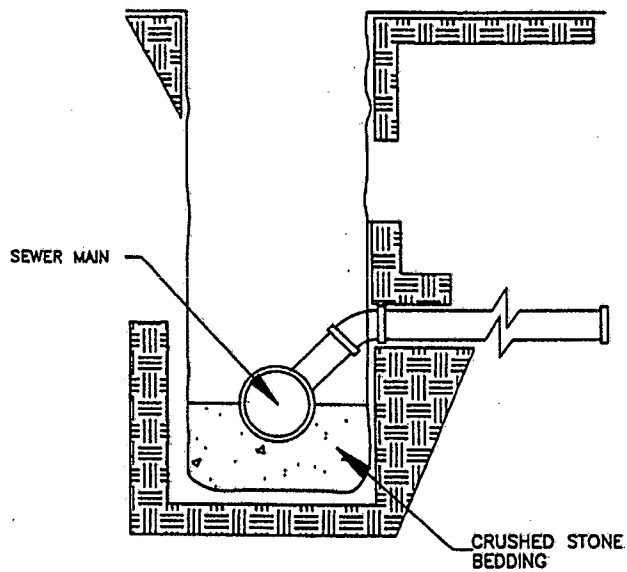
S-4

Approved:

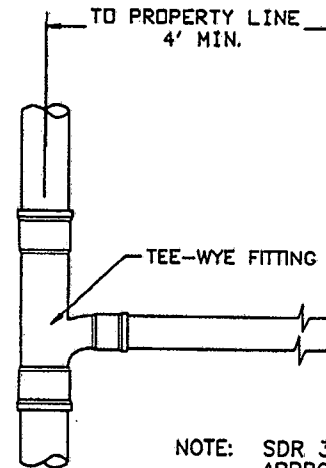
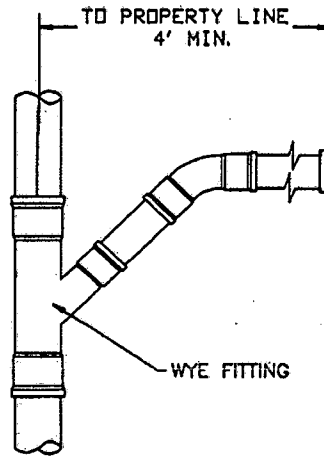
Scale: NONE
Date: MAR '95



<p>City Corporation RW Russellville Water & Sewer System & SIS</p>		<p>POST OFFICE BOX 458 205 WEST 3RD PLACE PHONE 968-2105 RUSSELLVILLE, ARKANSAS 72801</p>
<p>JOINT AT PIPE TRANSITION 6" THROUGH 12" PIPES</p>		
<p>S-5</p>	<p>Approved:</p>	<p>Scale: NONE Date: MAR '95</p>



NOTE: End of service lateral shall be marked with either a treated 2"x4" placed vertically, a buried metal stake, or a brightly colored rope from the end of the pipe to the surface of the ground.



NOTE: SDR 35 FITTINGS MAY BE USED IF APPROVED BY THE ENGINEER AND SDR 26 FITTINGS ARE NOT AVAILABLE.



POST OFFICE BOX 458 205 WEST 3RD PLACE
 PHONE 968-2105
 RUSSELLVILLE, ARKANSAS 72801

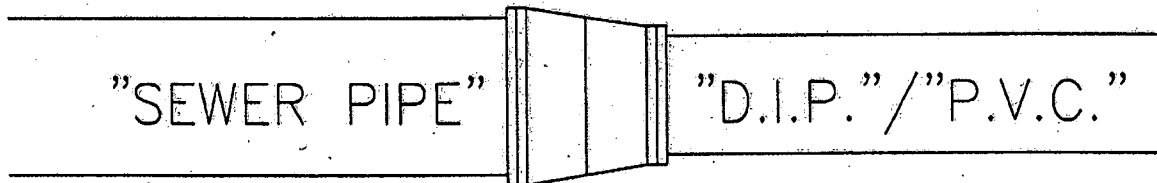
SERVICE LINE DETAILS

S-6

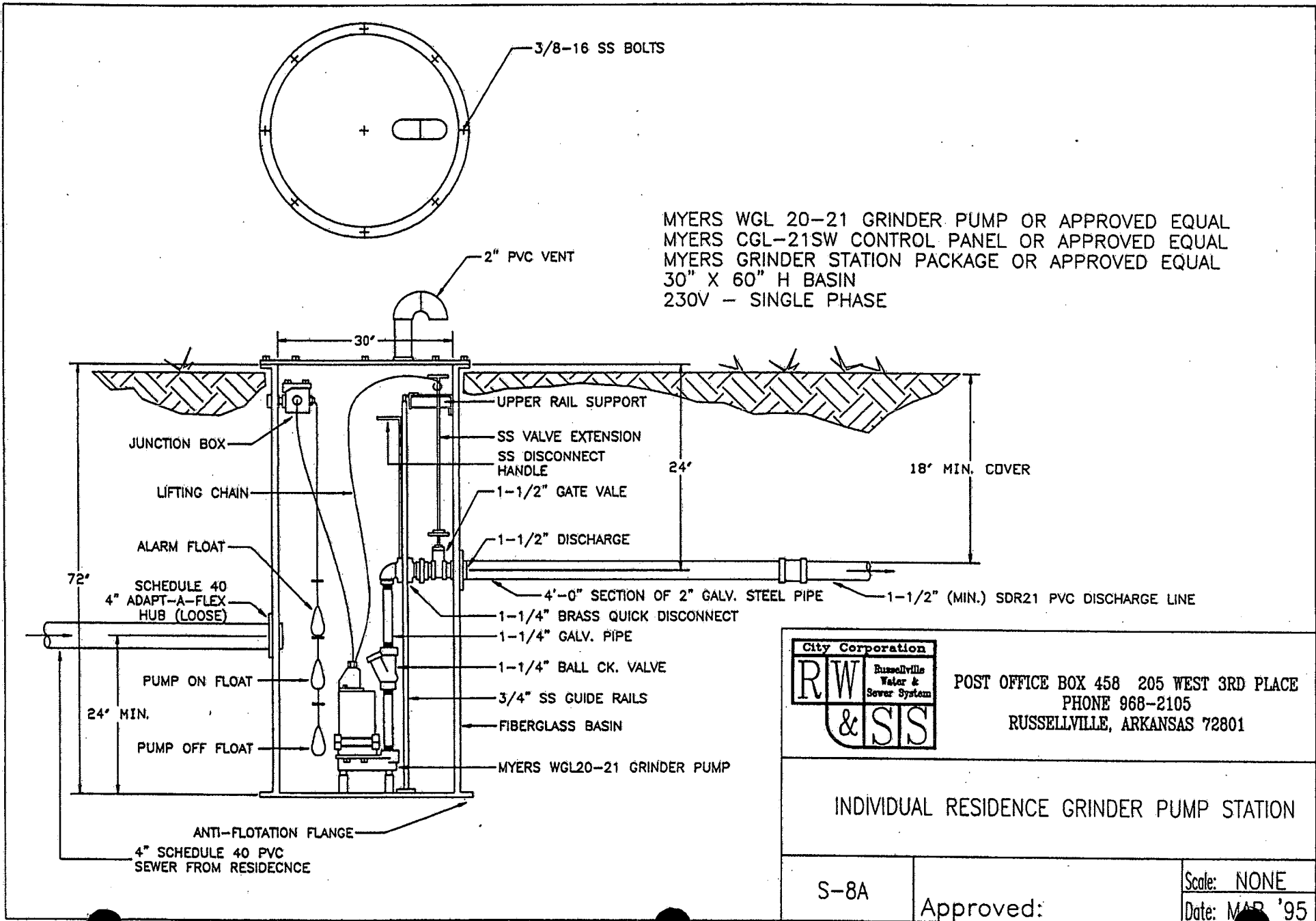
Approved:

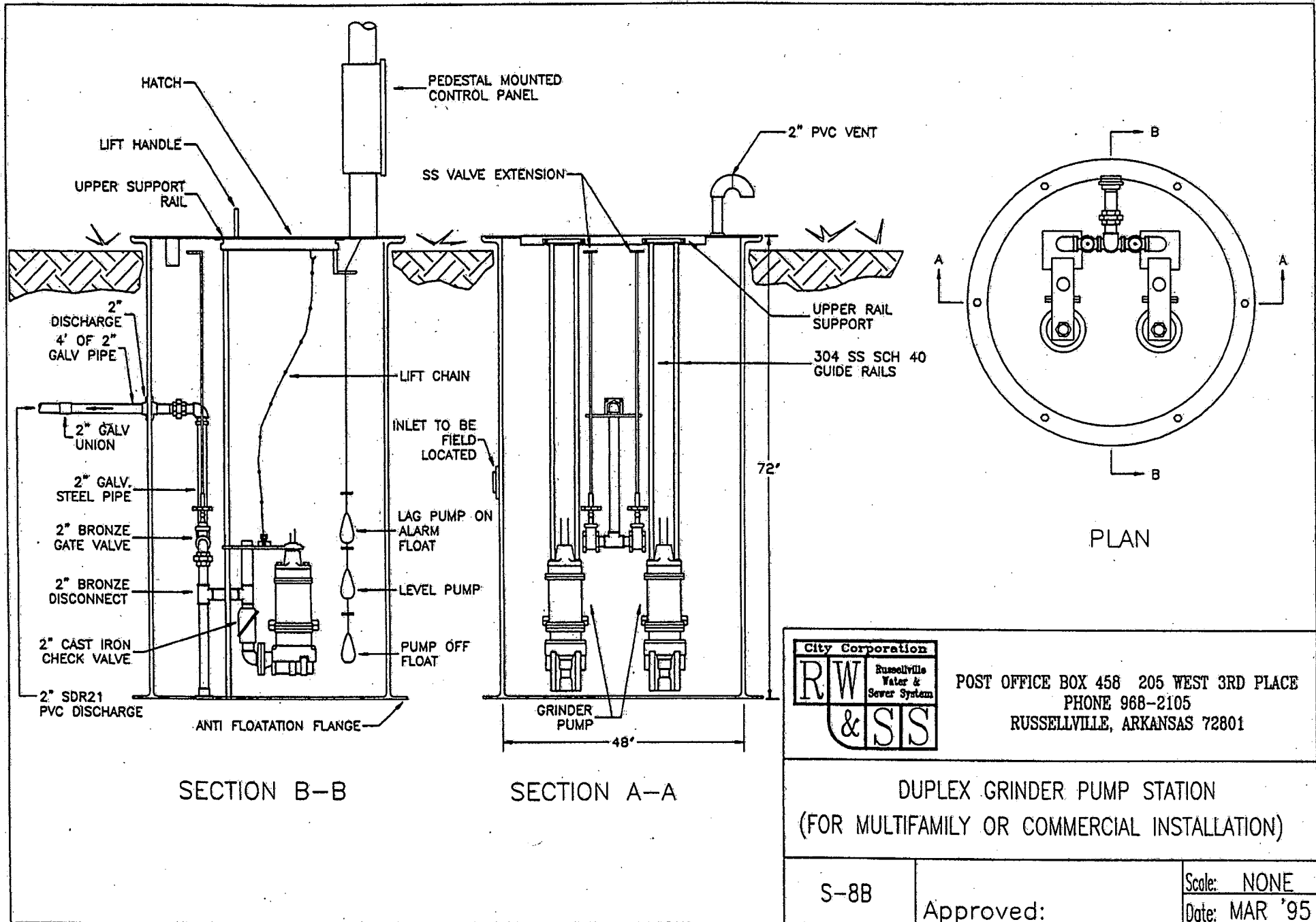
Scale: NONE
 Date: MAY '95

FLEXIBLE RUBBER COUPLING
WITH STAINLESS STEEL ENDS.



<p>City Corporation Russellville Water & Sewer System</p> <p>RW & SIS</p>		<p>POST OFFICE BOX 458 205 WEST 3RD PLACE PHONE 968-2105 RUSSELLVILLE, ARKANSAS 72801</p>
<p>JOINT AT PIPE TRANSITION 6" THROUGH 12" PIPES</p>		
<p>S-7</p>	<p>Approved:</p>	<p>Scale: NONE Date: MAR '95</p>





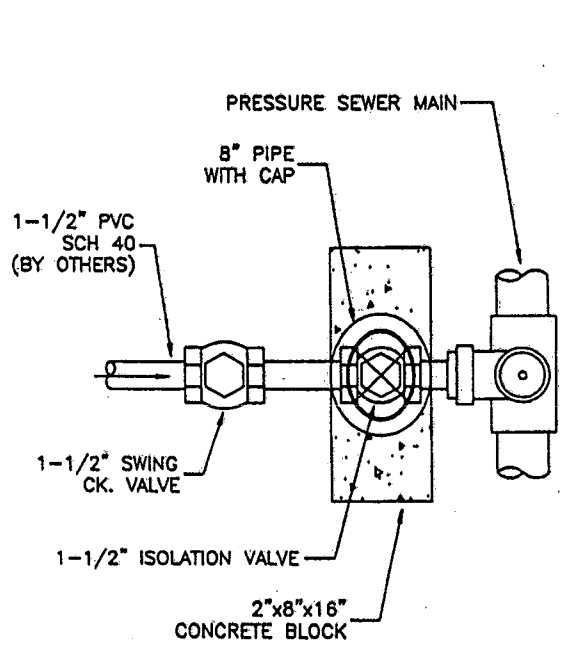
City Corporation
 Russellville Water & Sewer System
 POST OFFICE BOX 458 205 WEST 3RD PLACE
 PHONE 968-2105
 RUSSELLVILLE, ARKANSAS 72801

DUPLEX GRINDER PUMP STATION
 (FOR MULTIFAMILY OR COMMERCIAL INSTALLATION)

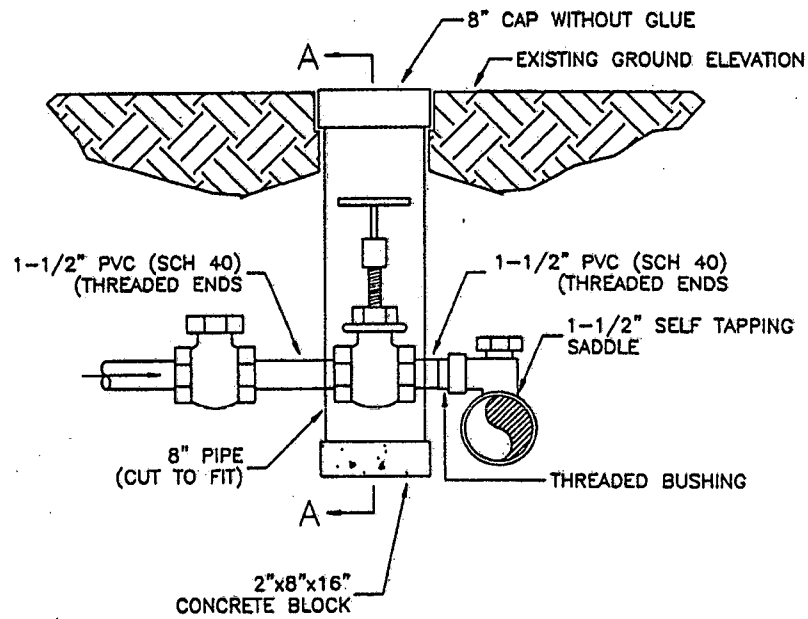
S-8B

Approved:

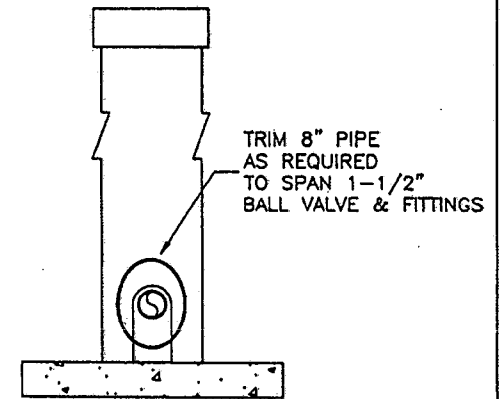
Scale: NONE
 Date: MAR '95



PLAN



SECTION



SECTION A-A



POST OFFICE BOX 458 205 WEST 3RD PLACE
 PHONE 968-2105
 RUSSELLVILLE, ARKANSAS 72801

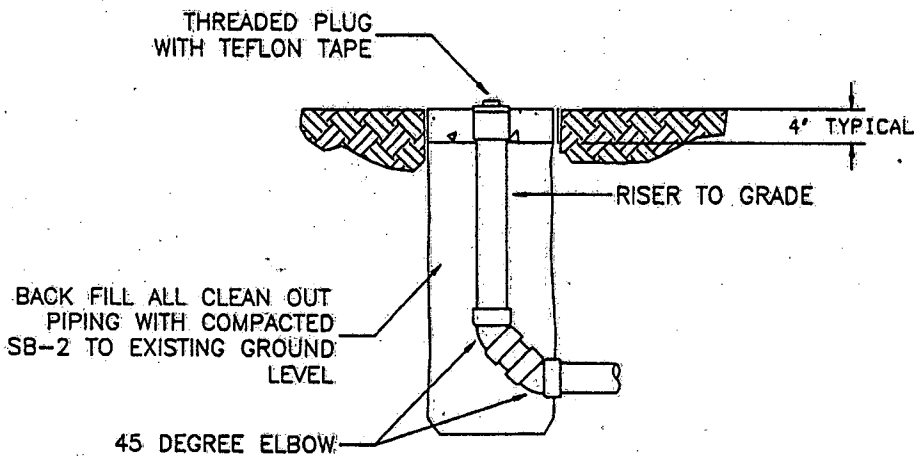
PRESSURE SEWER SERVICE DETAIL

S-9

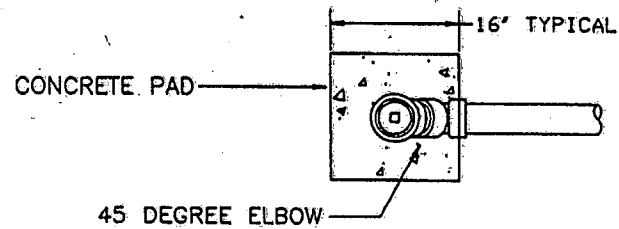
Approved:

Scale: NONE

Date: MAR '95



SECTION



PLAN

NOTE: ALL PIPE MATERIAL TO BE SCHEDULE 40 PVC



POST OFFICE BOX 458 205 WEST 3RD PLACE
 PHONE 968-2105
 RUSSELLVILLE, ARKANSAS 72801

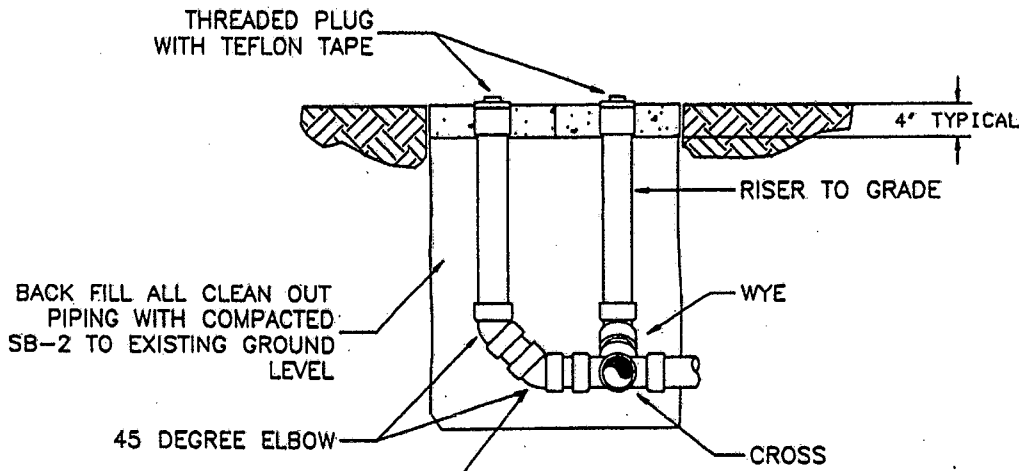
ONE WAY CLEAN OUT
 (SERVICE LINES ONLY)

S-10

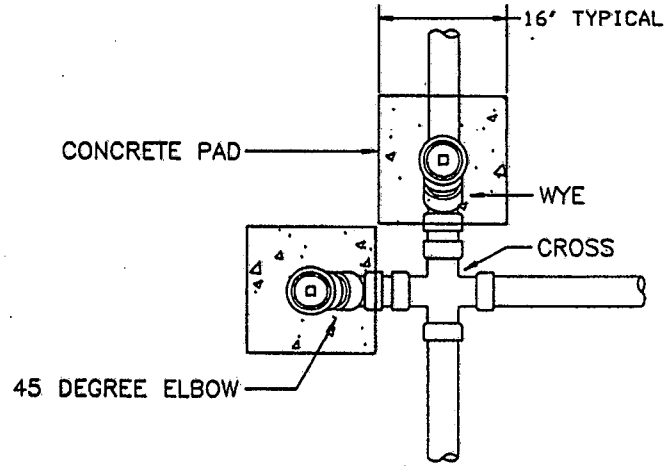
Approved:

Scale: NONE

Date: MAR '95



SECTION



PLAN

NOTE: A WYE SHALL BE USED WHEN TWO WAY CLEAN OUTS ARE USED AT THREE WAY INTERSECTIONS

NOTE: ALL PIPE MATERIAL TO BE SCHEDULE 40 PVC



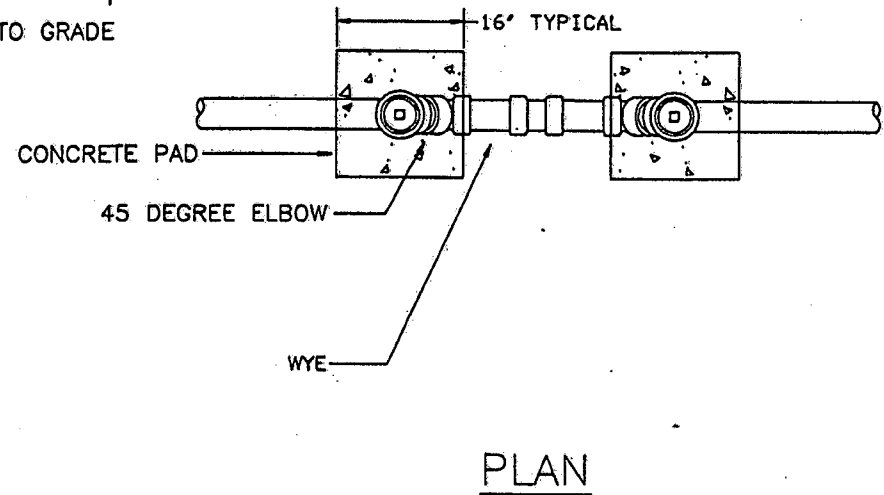
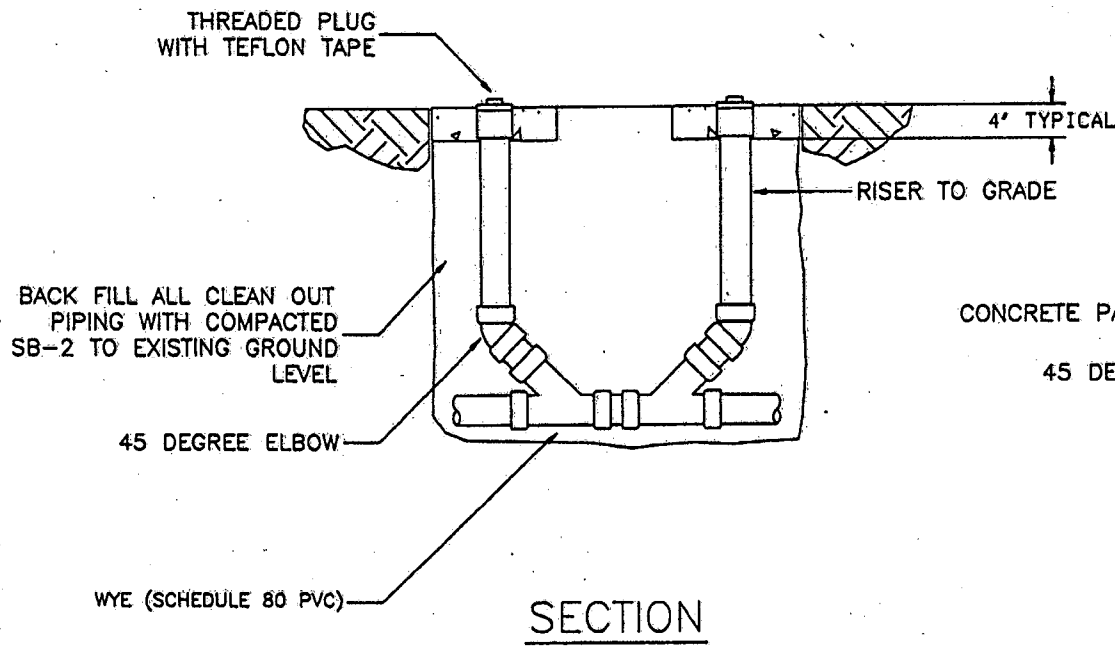
POST OFFICE BOX 458 205 WEST 3RD PLACE
 PHONE 968-2105
 RUSSELLVILLE, ARKANSAS 72801

TWO WAY CLEAN OUT

S-11

Approved:

Scale: NONE
 Date: MAR '95



NOTE: ALL PIPE MATERIAL TO BE SCHEDULE 40 PVC



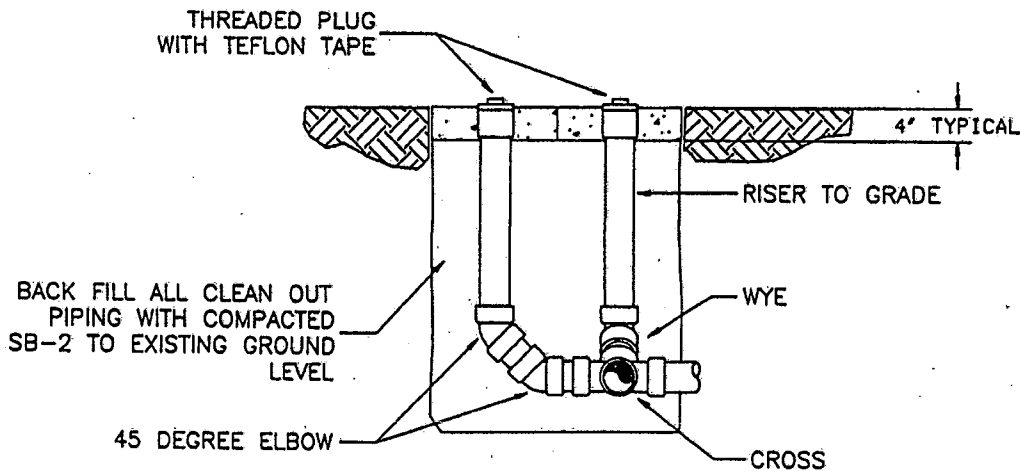
POST OFFICE BOX 458 205 WEST 3RD PLACE
 PHONE 968-2105
 RUSSELLVILLE, ARKANSAS 72801

TWO WAY CLEAN OUT

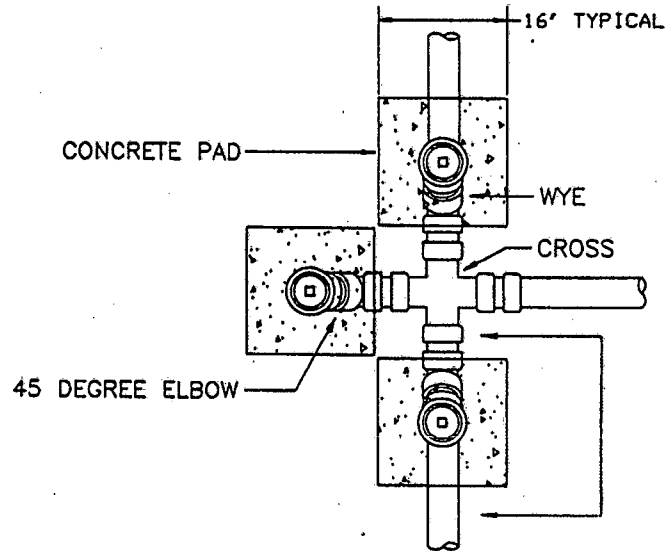
S-11A

Approved:

Scale: NONE
 Date: 1/30/95



SECTION



PLAN

NOTE: ALL PIPE MATERIAL TO BE SCHEDULE 40 PVC



POST OFFICE BOX 458 205 WEST 3RD PLACE
 PHONE 968-2105
 RUSSELLVILLE, ARKANSAS 72801

THREE WAY CLEAN OUT

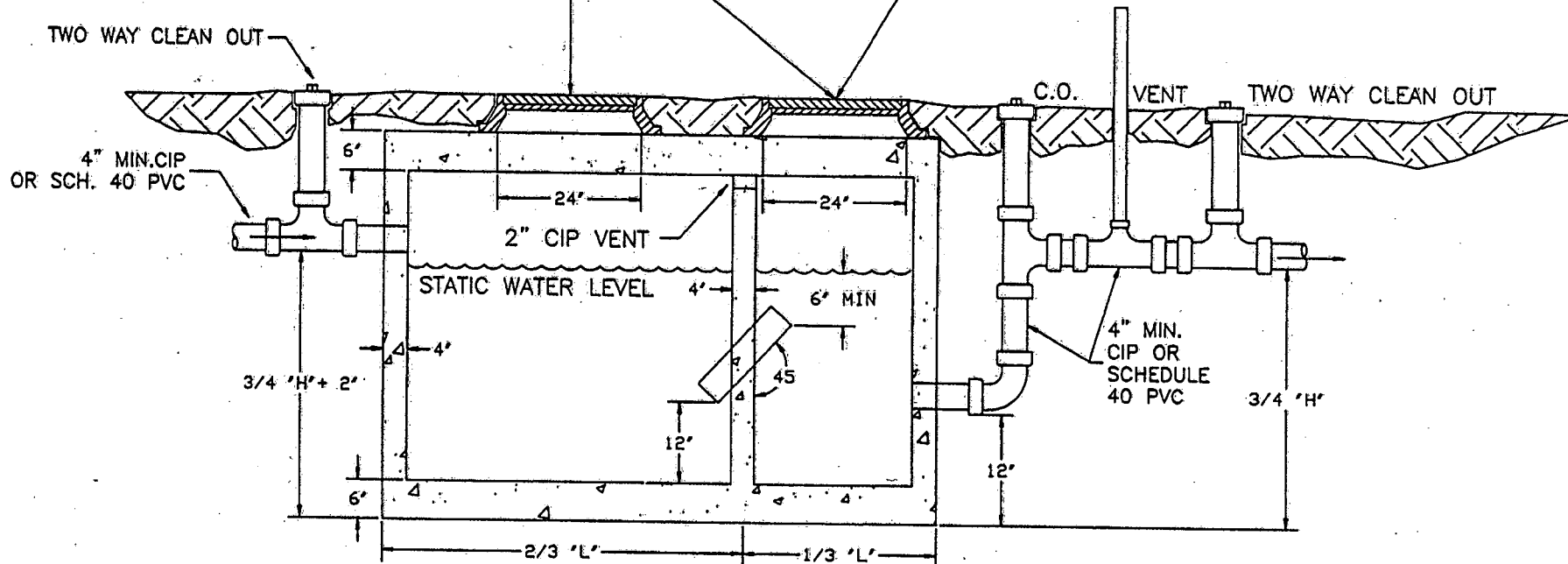
S-12

Approved:

Scale: NONE
 Date: MAR '95

STANDARD CC SANITARY
SEWER FRAME & COVER AS
IN STANDARD SPECIFICATIONS
TO GRADE.

NOTE: 6" C.O. MAY BE SUBSTITUTED
FOR MANHOLE OVER SECOND
COMPARTMENT WHEN 500 GAL.
TRAP IS USED



TANK SIZED FOR A 12 MINUTE DETENTION TIME WITH A
MINIMUM SIZE OF 500 GALLONS
ONE TANK - TWO COMPARTMENTS

MAX. CAPACITY	STANDARD TANK DIMENSIONS		
	L	W	H
500 GAL.	83	42	56
750 GAL.	90	52	57
1000 GAL.	90	64	59

NOTE: TANKS WITH DIMENSIONS OTHER THAN
THESE SHALL BE SUBMITTED TO
CITY CORPORATION FOR REVIEW.



POST OFFICE BOX 458 205 WEST 3RD PLACE
PHONE 968-2105
RUSSELLVILLE, ARKANSAS 72801

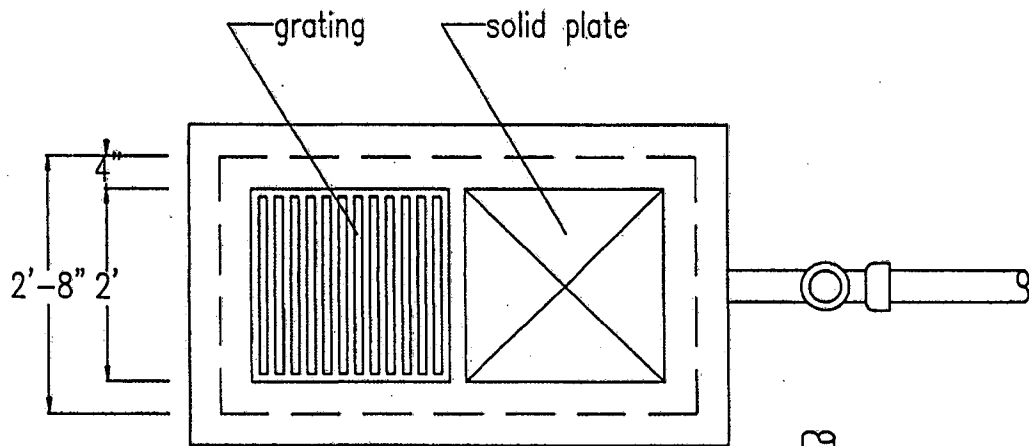
GREASE TRAP DETAIL

S-13

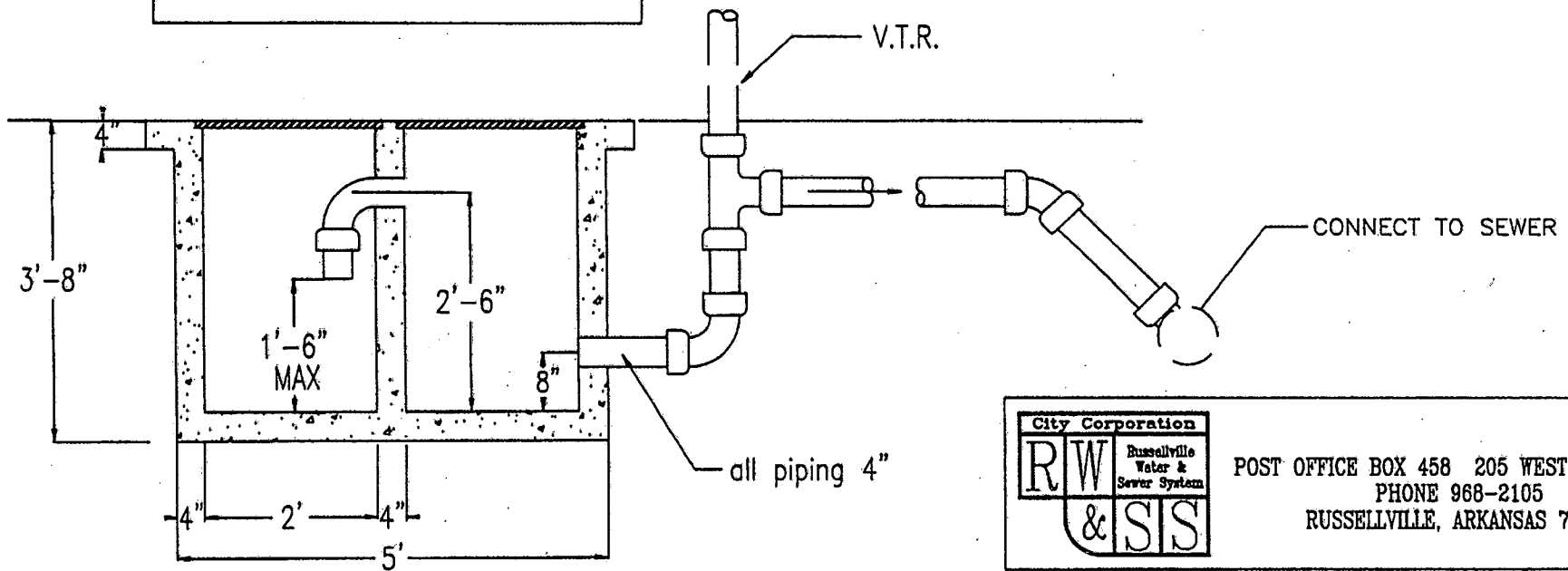
Approved:

Scale: NONE

Date: MAR '95



GRATING TO BE USED ONLY WHEN UNDER ROOF. OUTSIDE INSTALLATIONS SHALL HAVE SOLID COVERS ONLY.



NOTE: THIS INSTALLATION IS APPROVED FOR FLOWS OF 50 GPM OR LESS. FLOWS ABOVE 50 GPM REQUIRE INDIVIDUAL DESIGN.

City Corporation		POST OFFICE BOX 458 205 WEST 3RD PLACE PHONE 968-2105 RUSSELLVILLE, ARKANSAS 72801
RW	Russellville Water & Sewer System	
&SIS		

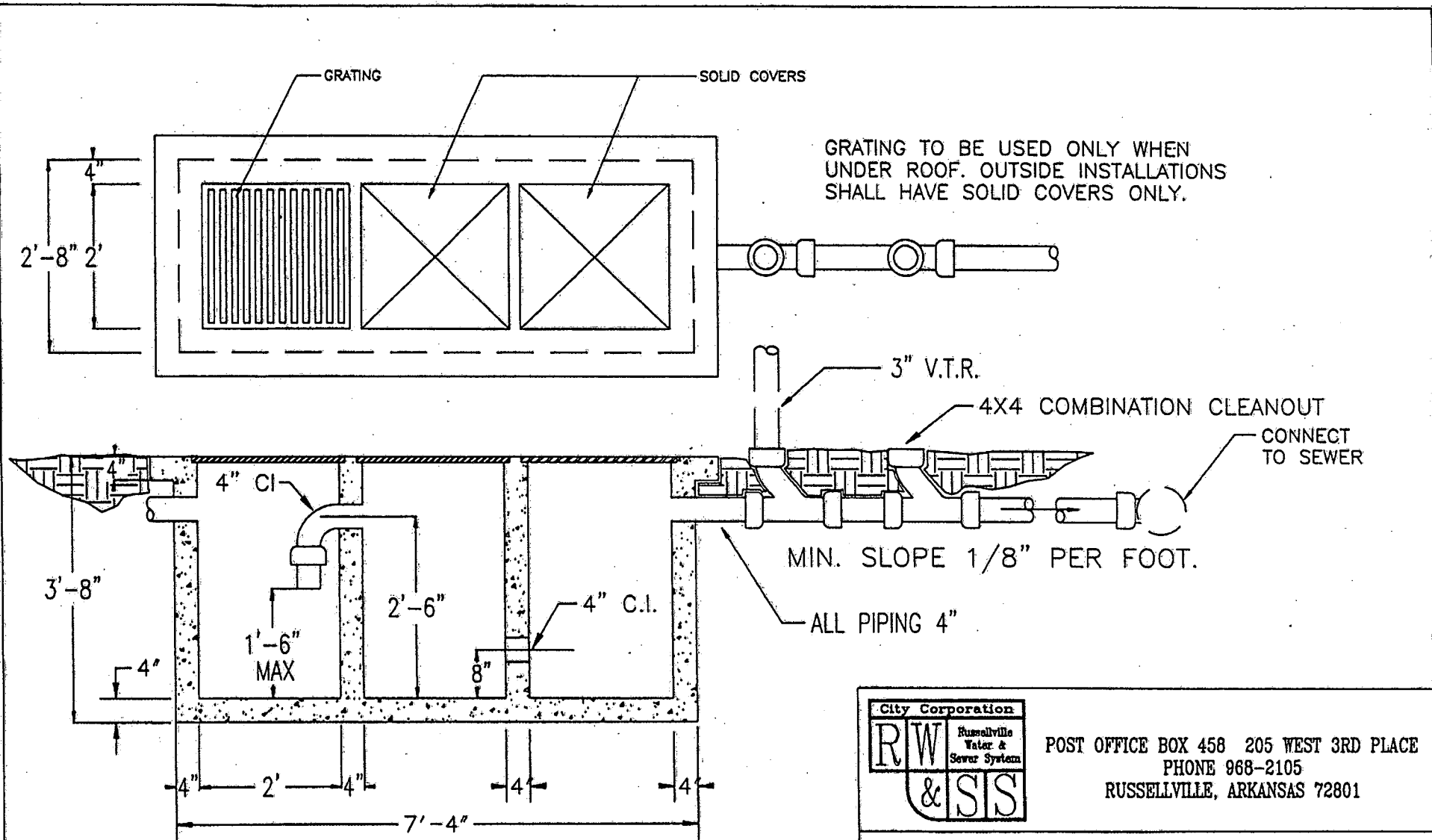
TWO COMPARTMENT SAND TRAP DETAIL

S-14A

APPROVED

SCALE: NONE

DATE: MAR '95



GRATING TO BE USED ONLY WHEN UNDER ROOF. OUTSIDE INSTALLATIONS SHALL HAVE SOLID COVERS ONLY.

MIN. SLOPE 1/8" PER FOOT.

ALL PIPING 4"

NOTE: THIS INSTALLATION IS APPROVED FOR FLOWS OF 50 GPM OR LESS. FLOWS ABOVE 50 GPM REQUIRE INDIVIDUAL DESIGN.



POST OFFICE BOX 458 205 WEST 3RD PLACE
 PHONE 988-2105
 RUSSELLVILLE, ARKANSAS 72801

THREE COMPARTMENT SAND TRAP DETAIL

S-14B

APPROVED

SCALE: NONE

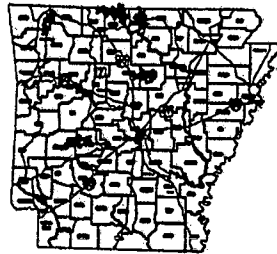
DATE: MAR '95

CITY CORPORATION

RUSSELLVILLE WATER AND SEWER SYSTEM
RUSSELLVILLE, ARKANSAS

STANDARD DUPLEX PUMP STATION PUMP CONTROL PANEL DESIGN

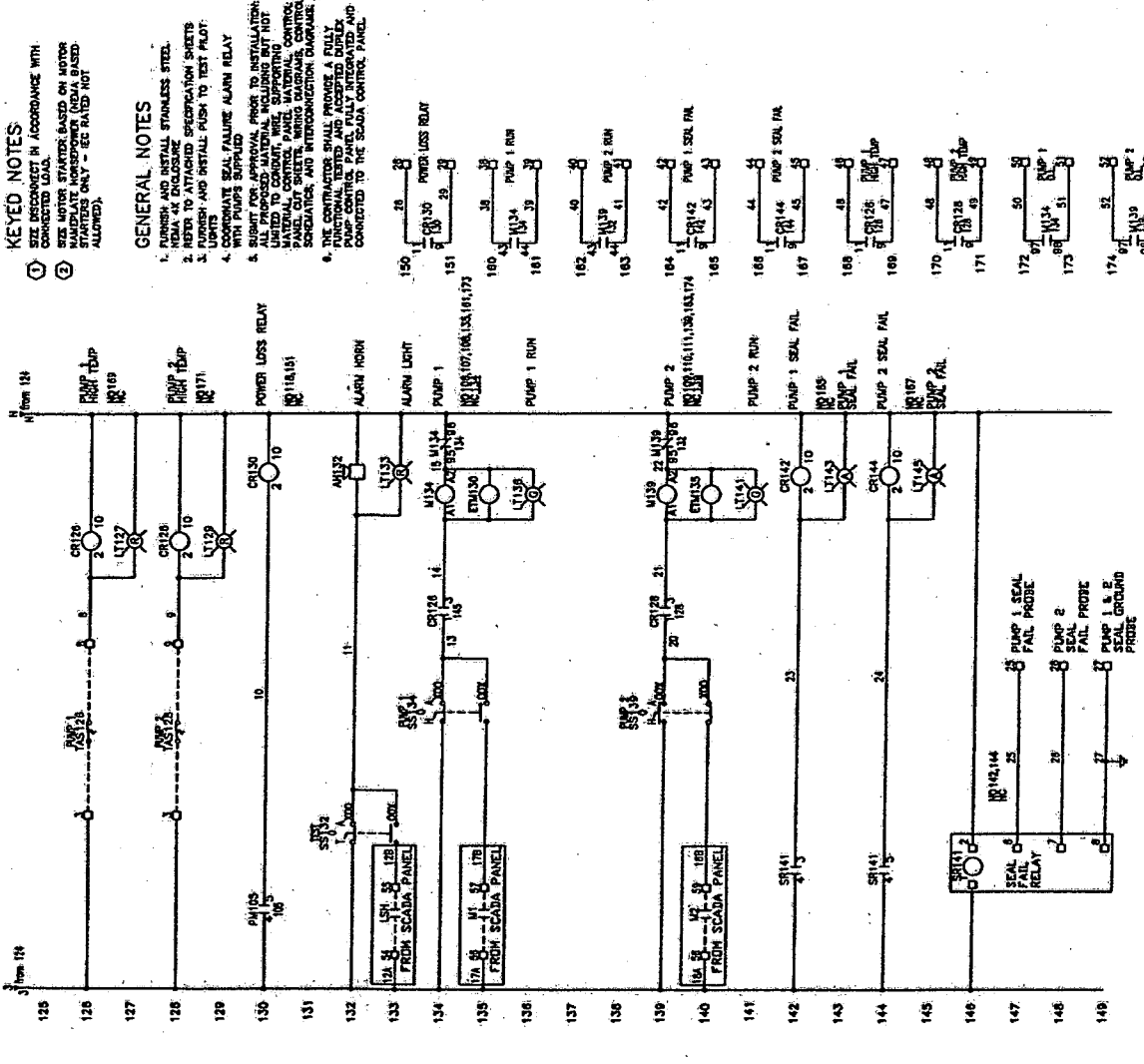
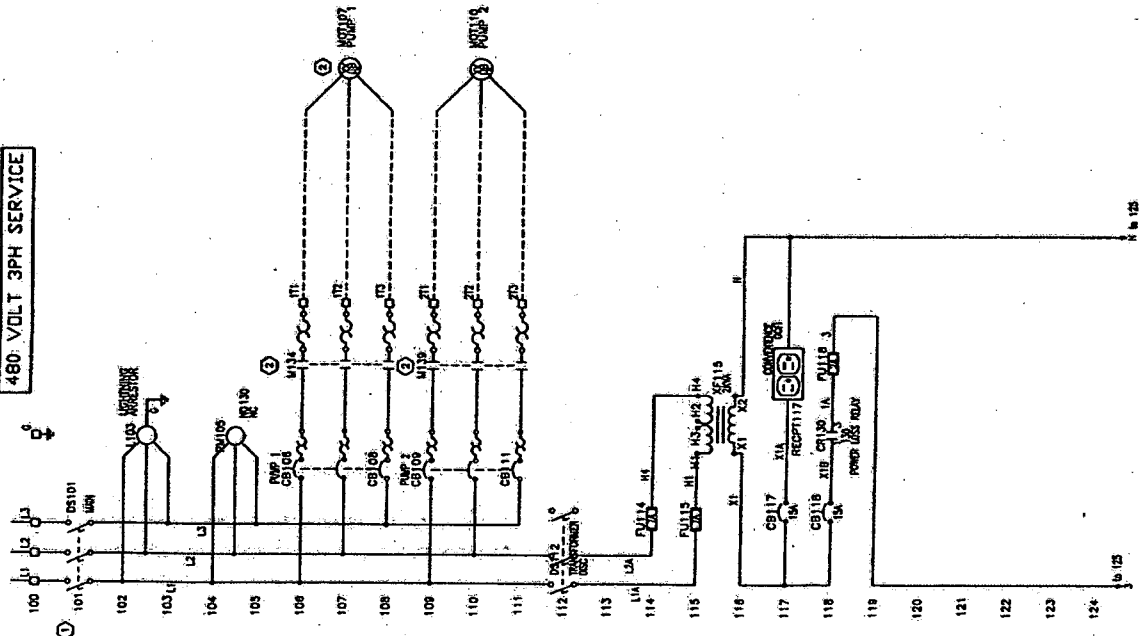
FEBRUARY, 2005



ARKANSAS



480 VOLT 3PH SERVICE



- KEYED NOTES**
1. REFER TO THE SPECIFICATIONS FOR THE PUMP MOTOR IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
 2. SEE MOTOR STARTERS BASED ON MOTOR HANDICAP (IF APPLICABLE) (IEEE BASED STARTERS ONLY - EC RATED NOT ALLOWED).

- GENERAL NOTES**
1. FINISH AND INSTALL STAINLESS STEEL.
 2. REFER TO ATTACHED SPECIFICATION SHEETS.
 3. FINISH AND INSTALL PUMP TO TEST PLOT.
 4. COORDINATE SEAL FAILURE ALARM RELAY WITH PUMP SUPPLIER.
 5. ALL PROPOSED MATERIAL INCLUDING BUT NOT LIMITED TO CONDUIT, WIRE, SUPPORTING MATERIAL, CONTROL PANELS, ALARMS, SENSORS, AND INTERCOMMUNICATION EQUIPMENT, SHALL BE APPROVED BY THE CONTRACTOR AND ACCEPTED BY THE OWNER AND ENGINEER.
 6. THE CONTRACTOR SHALL PROVIDE A FULLY FUNCTIONAL TESTED AND ACCEPTED DUPLEX CONTROL PANEL TO THE SCADA CONTROL PANEL.

POST OFFICE BOX 100
 MISSISSAUGA, ONTARIO L4Y 4G7
 CANADA
 TEL: (905) 874-2200
 FAX: (905) 874-2201

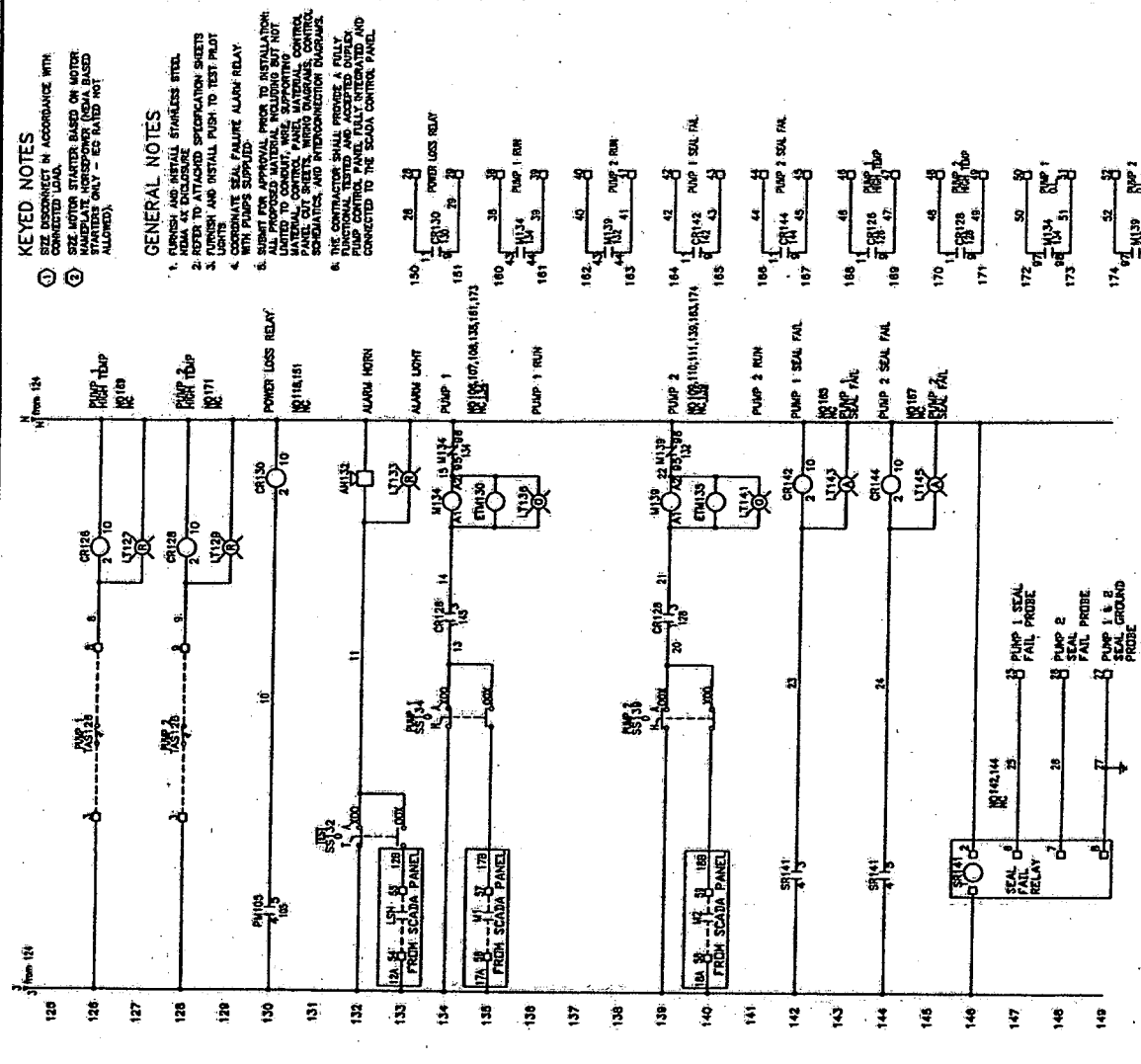
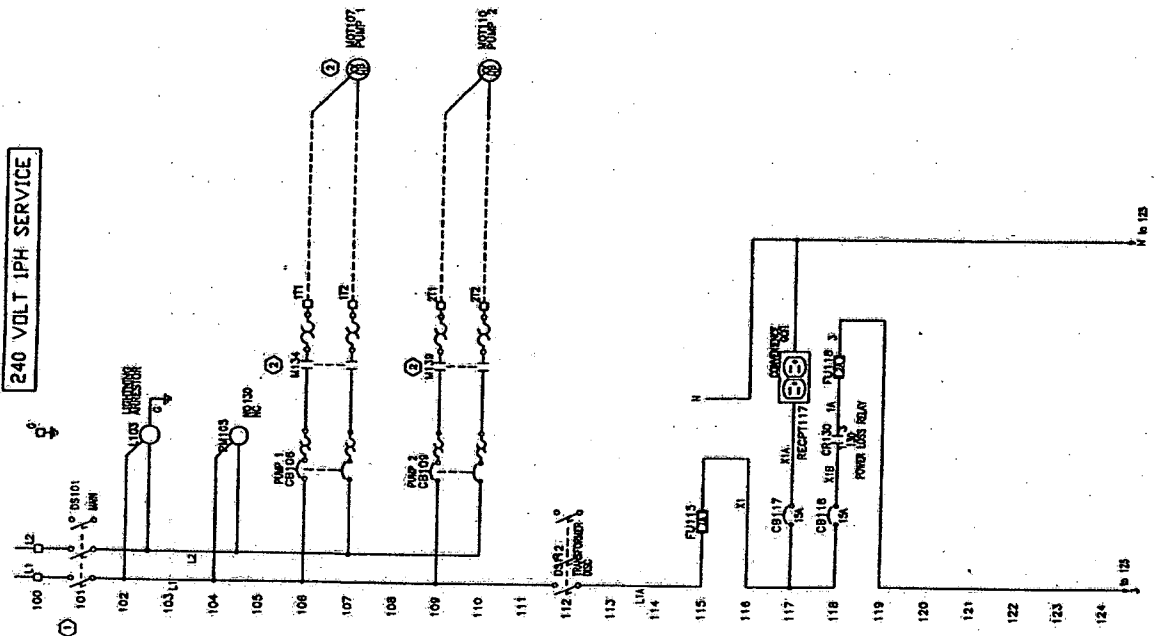


STANDARD DUPLEX PUMP STATION
 PUMP CONTROL PANEL DESIGN

JOB No.	10011001
Date	2/1/2004
Designed by	...
Drawn by	...
Sheet Number	1 of 3

2004

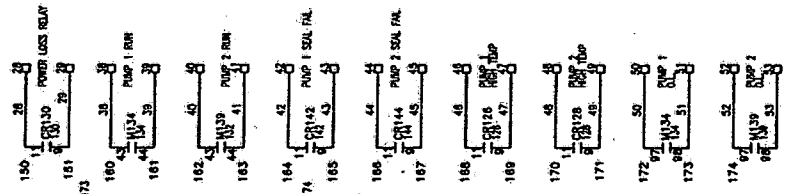
240 VOLT 1PH SERVICE



KEYED NOTES
 ① SIZE DISCONNECT IN ACCORDANCE WITH CONNECTED LOAD.
 ② SIZE MOTOR STARTER BASED ON MOTOR MAKE/PLATE INFORMATION (NEMA CLASSIFIED ONLY - EC RATED NOT ALLOWED).

GENERAL NOTES

1. FINISH AND INSTALL STAINLESS STEEL KEMA AS SPECIFIED.
2. REFER TO ATTACHED SPECIFICATION SHEETS FOR MATERIALS AND INSTALLATION INSTRUCTIONS.
3. FURNISH AND INSTALL PUSH TO TEST PLUG WITH PUMP'S SUPPLIED.
4. COORDINATE SEAL FAILURE ALARM RELAY WITH PUMP'S SUPPLIED.
5. SUBMIT FOR APPROVAL PRIOR TO INSTALLATION: ALL PROPOSED MATERIAL INCLUDING BUT NOT LIMITED TO: MATERIALS, WIRING, CONTROL PANEL, GUT SHEETS, WIRING DIAGRAMS, CONTROL SCHEMATICS, AND INTERCONNECTION DIAGRAMS.
6. THE CONTRACTOR SHALL PROVIDE A FULLY OPERATIONAL PUMP CONTROL PANEL INTERLOCKED AND CONNECTED TO THE SCADA CONTROL PANEL.



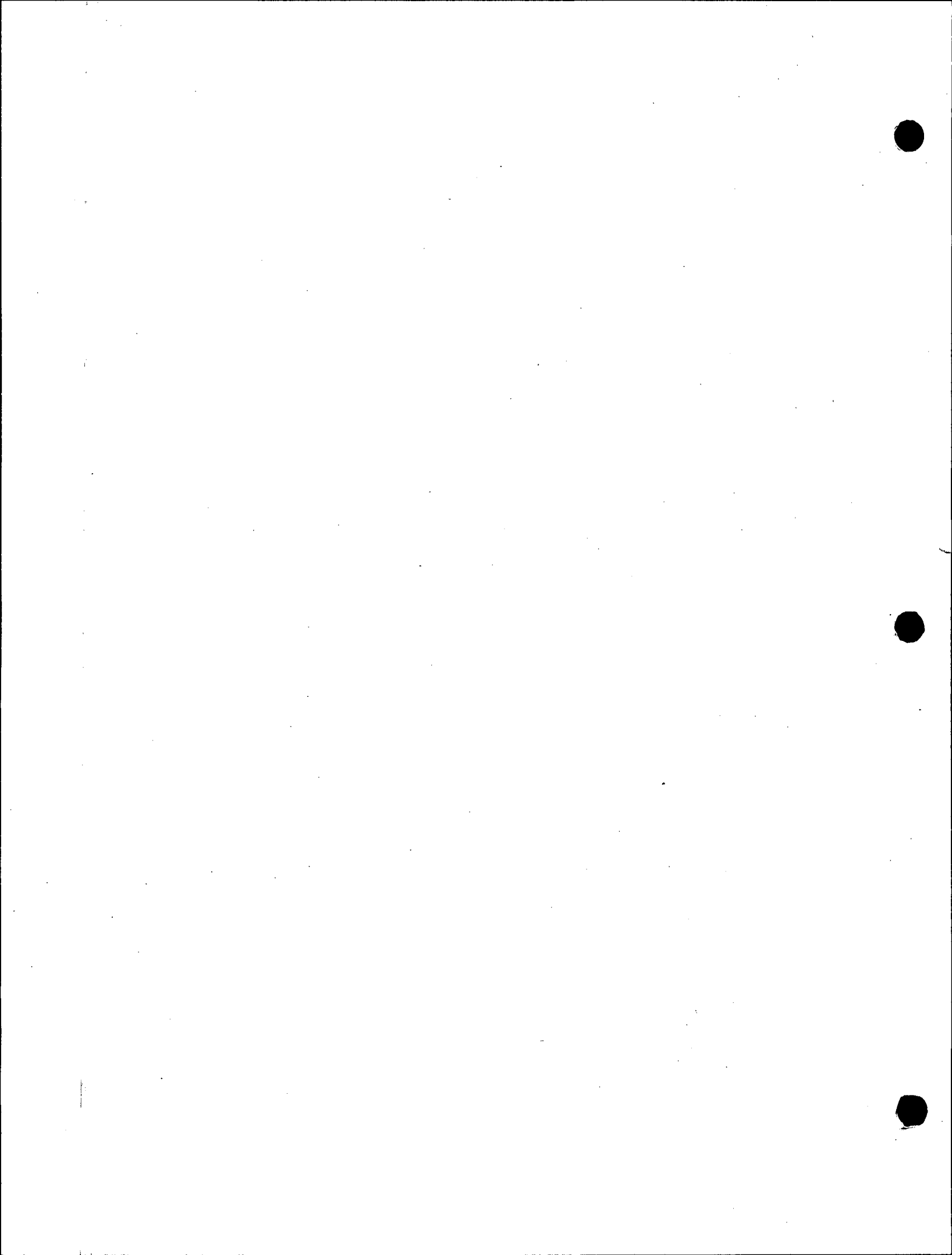
STANDARD DUPLEX PUMP STATION
 PUMP CONTROL PANEL SCHEMATIC
 240 VOLT - 1 PHASE

POST OFFICE BOX 459 205 WEST 3RD PLACE
 FERRIS 689-2105
 HESSELBACH, ARKANSAS 72801



Job No. _____
 Date _____
 Drawn by _____
 Sheet Number **3 of 3**

Project: Duplex - 240 VOLT - 1PHASE - 120V 1PH SERVICE - City Corp. 12/20/2008 4:01 PM
 Drawn: [Name] - City Corp. 12/20/2008 4:01 PM
 Checked: [Name] - City Corp. 12/20/2008 4:01 PM
 Approved: [Name] - City Corp. 12/20/2008 4:01 PM



OILFIELD ARRESTORS

Rapid Response, High Current Delta Arrestors™ For Industrial Use Help Prevent Voltage Surge and Lightning Damage to Motors and Control Equipment.



600 SERIES SPECIFICATIONS

Type of design	Silicon Oxide Varistor
Maximum current	100,000 amps
Maximum energy	3000 joules
Maximum number of surges	Unlimited
Response time one millamp test	5 nanoseconds
Response time to clamp 10,000 amps	10 nanoseconds
Response time to clamp 50,000 amps	25 nanoseconds
Leak current at double the rated voltage	none
Leads	36" #12 THHN
Case material	PVC
Locknut and Washer furnished	



NIPPLE
1/2" Thread

CASE DIMENSIONS: 4 1/2" High
2 1/4" Diameter

SIMPLE INSTALLATION

Fasten the arrester to the service entrance equipment. Connect the black wires to the lines below the main disconnect. Connect the white wire to the grounded neutral bus.

- LA 603 for 440-600 Volt 3 Phase 3 or 4 Wire Service**
- LA 602 for 440-600 Volt Single Phase 3 Wire Service**
- LA 601 for 440-600 Volt Single Phase 2 Wire Service**

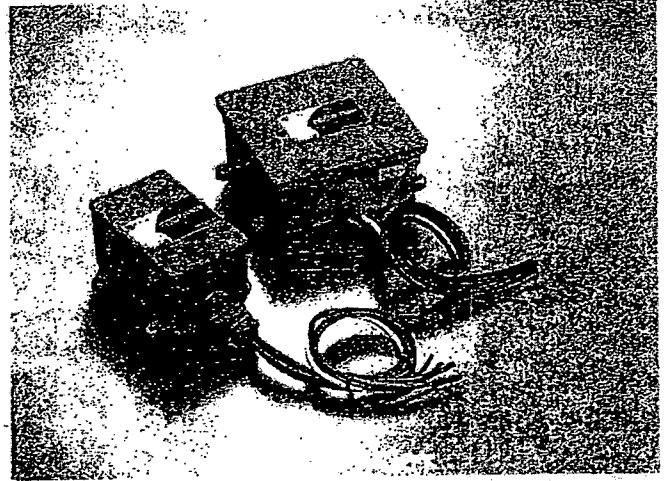
Conduction Characteristics								8 X 20 microsecond wave shape ANSI IEEE NEMA STANDARD	
Discharge Current	5000 A	10000 A	20000 A	40000 A	60000 A	80000 A	100000 A		
Clamping Voltage	450 V	920 V	1040 V	1500 V	2300 V	4000 V	5000 V		
Unlimited Operations						One Operation			
DELTA LIGHTNING ARRESTORS,™ INC.								P. O. BOX 750 BIG SPRING, TEXAS 79721	

ZoneDefender



80kA power surge protection for small distribution panels, tower lights, equipment cabinets and confined spaces

- AC or DC application
- Straightforward and simple installation - wall or flush mounting
- LED status indication via solid state diagnostics plus remote indication contacts
- Thermal and short circuit fusing
- UL 1449 2nd Edition Listed
- 10 year product warranty



The ZoneDefender Series of power surge protection devices has been specifically designed for interior lighting and small distribution panels. These compact and durable devices offer cost effective, high capacity protection along with application versatility, features which make the Series the ultimate surge protection solution.

ZoneDefender units, with a 80kA surge handling capability per phase, provide protection between Line to Neutral, Line to Ground, Line to Line and Neutral to Ground. Utilizing Metal Oxide Varistor (MOV) technology, the ZoneDefender's protection circuits are highly reliable, dual-redundant varistor networks ensuring your site is never unprotected. Fully automatic in operation, ZoneDefender reacts immediately, clamping voltage surges without causing undue leakage losses under normal operation. No operator intervention is required, ZoneDefender resets automatically and is maintenance free.

Suitable for AC or DC applications, ZoneDefender devices provide protection for AC or DC power supplies with no restriction to the amount of load current. ZoneDefender DC versions are available utilizing SAD (Silicon Avalanche Diode) technology in addition to the standard MOVs. DC versions are also available with EMI filtering, should this be required.

Thermal fusing is incorporated into each ZoneDefender as an additional safety feature. Short circuit protection is also supplied, as standard, for added peace of mind.

ZoneDefender offers an LED Status indication facility allowing each varistor network to be continually monitored and indicated by LEDs on the front panel of the device. In addition, remote monitoring is enabled by the units' remote indication contacts.

Installation is simple - the NEMA 4X enclosure of ZoneDefender devices can be easily 'wall mounted'. Alternatively, ZoneDefender units may be flush mounted by way of an optional mounting plate which should be specified at time of order placement.

The ZoneDefender Series is UL 1449 2nd Edition Listed and boasts an unrivalled 10 year 'no questions asked' manufacturers product warranty. ZoneDefender devices also exceed the requirements of ANSI/IEEE C62.45 and ANSI/IEEE C62.41.

AC & DC Power Protection

Specification

All figures typical at 77°F (25°C) unless otherwise stated

Maximum surge current

80kA (8/20µs)*

* except ZoneDefender DC versions.

See specifications table for details.

Lines protected AC

L-N, L-G, L-L, N-G

Lines protected DC

V+, V-

Ambient temperature limits

-40°F to +185°F (-40°C to +85°C) -working

Humidity

95% RH (non-condensing)

Enclosure

NEMA 1, 2, 3, 3R, 4, 4X, 12 and 13 (IP66)

Terminals

12 AWG (3mm²)

Mounting

Surface mount by 0.21" (5mm) diameter holes or flush mount via mounting plate (Optional at time of order)

Remote contacts

NC 250Vac, 5A rated

Indication

Green LED on Protection present
Green LED off Internal failure

Weight

Three phase units

3.6 lbs (1.64Kg)

Split phase units

2.0 lbs (0.91Kg)

Single phase units

1.9 lbs (0.86Kg)

Dimensions

Three phase units

5.3" x 5.3" x 2.3"

(134.5mm x 134.5mm x 58.4mm)

Split phase units & single phase units

4.5" x 2.9" x 2.5"

(114.3mm x 73.6mm x 63.5mm)

Compliance

BS EN 60950: 1992

BS EN 61000-6-2: 1999

Model	Working voltage (V)	UL1449 Listing (V)	Let-through voltage		Max. continuous operating voltage (Vac)	Phase types
			@ 3kA†	@ 10kA†		
AC versions						
14400	120	400	435	730	140	Single phase 2-wire
14401	120/240 split*	400	435	730	140	Split phase 3-wire
14402	120/208	400	435	730	140	Three phase 4-wire WYE
14404	277/480	700	890	1200	320	Three phase 4-wire WYE
14406	480	1500	1600	2100	550	Three phase 3-wire Delta
14407	220/380	700	790	1200	275	Three phase 4-wire WYE
14408	240/415	700	890	1200	320	Three phase 4-wire WYE
14409	220	700	790	1200	275	Single phase 2-wire
DC versions						
14612	12V DC	N/A	120	292	15kA	—
14624	24V DC	N/A	140	340	36kA	—
14648	48V DC	N/A	280	504	53kA	—
14712	12V DC	N/A	120	292	15kA	EMI filter
14724	24V DC	N/A	140	340	36kA	EMI filter
14748	48V DC	N/A	280	504	53kA	EMI filter
14812	12V DC	N/A	120	292	15kA	EMI filter & remote LED
14824	24V DC	N/A	140	340	36kA	EMI filter & remote LED
14848	48V DC	N/A	280	504	53kA	EMI filter & remote LED

* Suitable for US use only † 8/20µs waveform - Tested as per ANSI/IEEE C62.45 and ANSI/IEEE C62.41

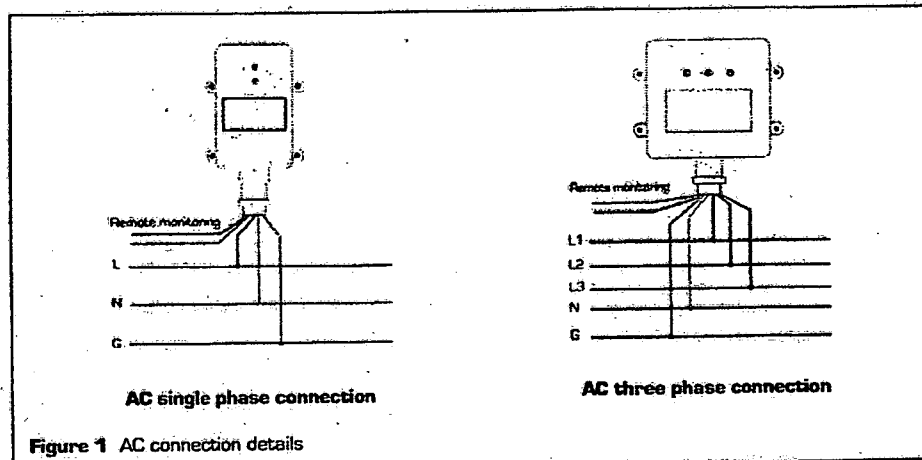


Figure 1 AC connection details

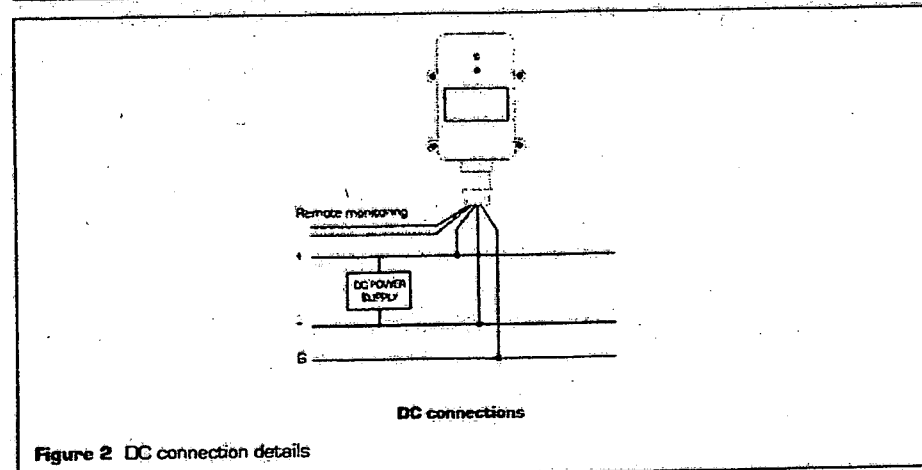


Figure 2 DC connection details

To order specify -

As per table above.

Note: In accordance with our policy of continuous improvement, we reserve the right to change the product's specification without notice.

Approvals

Country	Standard/Authority	Approved for	Product
United States Canada	UL 1449 2nd Edition Listed (C-UL US Listed)	AC power product	14400, 14401, 14402, 14404, 14406, 14407, 14408, 14409

Atlantic Scientific Corporation
4300 Fortune Place, Suite A W. Melbourne, FL 32904 USA
Tel: +1 800-544-4737 +1 321-725-8000 Fax: +1 321-727-0736
E-mail: eglese@atlanticscientific.com, Web: www.atlanticscientific.com

A member of the MTL Instruments Group plc



Rev 0 02/05/04

Features

Four adjustment pots provide versatility for all kinds of applications.

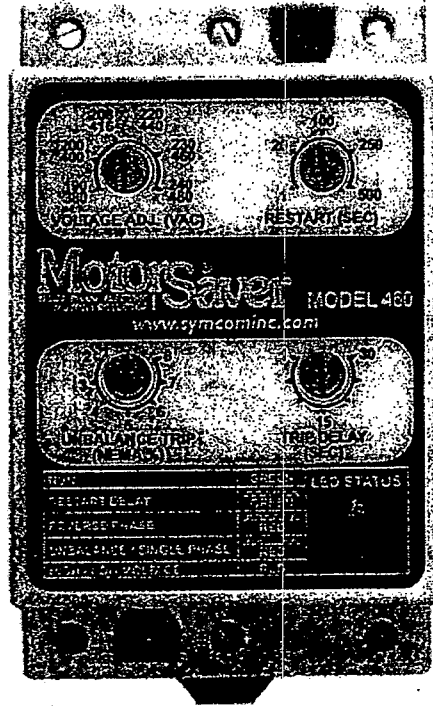
Universal range from 190-480 VAC 50/60 Hz provides the versatility needed to handle global applications.

Diagnostic LEDs indicate trip status and make trouble shooting a snap.

Microcontroller based circuitry provides better accuracy and higher reliability than analog designs.

Transient protected to meet IEEE and IEC standards to stand up under tough conditions.

Will detect single phase condition regardless of regenerated voltages.



The **Model 460** is designed to protect 3-phase loads from damaging power conditions. The 460's wide operating range combined with UL and CE compliance enables quick access to domestic and global markets.

A unique microcontroller-based voltage and phase sensing circuit constantly monitors the three phase voltages to detect harmful power line conditions. When a harmful condition is detected, the MotorSaver's output relay is deactivated after a specified trip delay. The output relay reactivates after power line conditions return to an acceptable level for a specified amount of time (Restart Delay). The trip and restart delays prevent nuisance tripping due to rapidly fluctuating power line conditions.

The Model 460 automatically senses whether it is connected to a 190 to 240V 60 Hz system, or a 440-480V 60 Hz system, or a 380 to 416V 50 Hz system. An adjustment is provided to set the nominal line voltage from 190-240 or 380-480 VAC. Other adjustments include a 1-30 second trip delay, a 1-500 second restart delay, and a voltage unbalance trip point adjustment from 2-8%.

MotorSaver
THREE PHASE ELECTRIC
MOTOR PROTECTOR

Model 460

**Three Phase
Voltage Monitor**

**Engineered
Protection**

**Microcontroller
Based**

**Protects 3-Phase
motors from:**

- Loss of any Phase
- Low Voltage
- High Voltage
- Voltage Unbalance
- Phase Reversal
- Rapid Cycling

Additional Features:

- Compact Design
- UL and cUL listed
- CE Compliant
- Finger Safe Terminals
- 5 year Warranty
- Made in USA
- Standard Surface or DIN Rail Mount
- Standard 1-500 sec. Variable Restart Delay
- Standard 2-8% Adj. Voltage Unbalance
- Standard Trip Delay 1-30 sec.
- One 10 Amp General Purpose Form C Relay

 **SymCom Inc**
Motor Protection & Controls Since 1974

2880 North Plaza Drive • Rapid City, SD 57702
(800) 843-8848 • (605) 348-5580 • FAX (605) 348-5685
www.symcominc.com • email: sales@symcominc.com

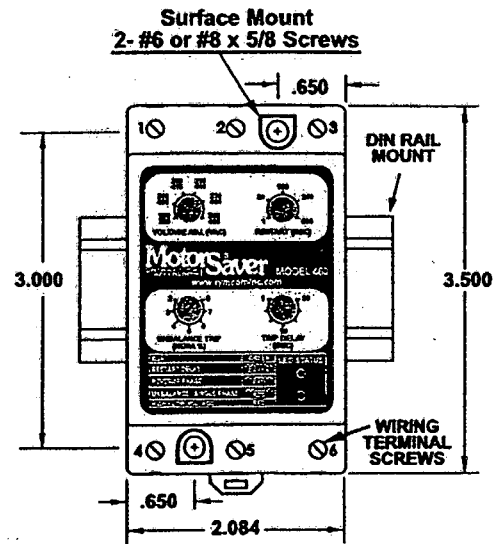


Specifications
Operating Points
Special Options

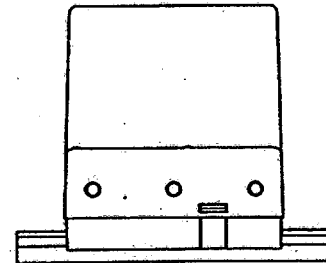
Model 460 Three Phase Voltage Monitor

Specifications	
3-Phase Line Voltage	190 - 480 VAC (475 - 600 VAC Optional) (95 - 120 VAC Optional)
Frequency	50* or 60 Hz
Low Voltage (% of set point)	
•Trip	90% ±1%
•Reset	93% ±1%
High Voltage (% of set point)	
•Trip	110% ±1%
•Reset	107% ±1%
Voltage Unbalance (NEMA)	
•Trip	2 - 8% Adjustable
•Reset	Trip setting minus 1% (5 - 8%) Trip setting minus .5% (2 - 4%)
Trip Delay Time	
•Low & High Voltage and Unbalance	1 - 30 seconds adjustable
•Single Phasing Faults (>25% UB)	1 second fixed
Restart Delay Time	
•After a Fault	1 - 500 seconds adjustable
•After a Complete Power Loss	1 - 500 seconds adjustable
Output Contact Rating	
•1-Form C	10 A General Purpose @240 VAC Pilot Duty 480VA @ 240 VAC, B300
Power Consumption	6 Watts (Max.)
Weight	14 oz.
Enclosure	polycarbonate
Terminal Torque	6 in.-lbs.
Safety Marks	
•UL	UL508
•CE	IEC 60947-6-2
Standards Passed	
•Electrostatic Discharge (ESD)	IEC 1000-4-2, Level 3, 6kV contact, 8kV air
•Radio Frequency Immunity, Radiated	150 MHz, 10V/m
•Fast Transient Burst	IEC 1000-4-4, Level 3, 3.5 kV input power & controls
Surge	
•IEC	IEC 1000-4-5, Level 3, 4kV line-to-line; Level 4, 4kV line-to-ground
•ANSI/IEEE	C62.41 Surge and Ring Wave Compliance to a level of 6kV line-to-line
•Hi-potential Test	Meets UL508 (2 x rated V +1000V for 1 minute)
Environmental	
Temperature Range	Ambient Operating: -20° - 70° C (-4° - 158°F) Ambient Storage: -40° - 80° C (-40° - 176°F)
Class of Protection	IP20, NEMA 1 (FINGER SAFE)
Relative Humidity	10-95%, non-condensing per IEC 68-2-3
*Note: 50 Hz will increase all delay timers by 20%	

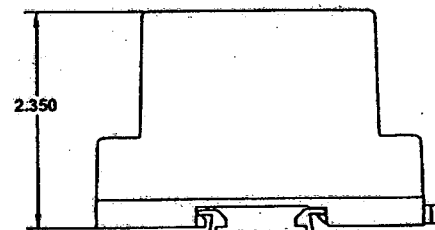
SymCom warrants its microcontroller based products against defects in material or workmanship for a period of five (5) years from the date of manufacture. All other products manufactured by SymCom shall be warranted against defects in material and workmanship for a period of two (2) years from the date of manufacture. For complete information on warranty, liability, terms, returns, and cancellations, please refer to the SymCom Terms and Conditions of Sale document.



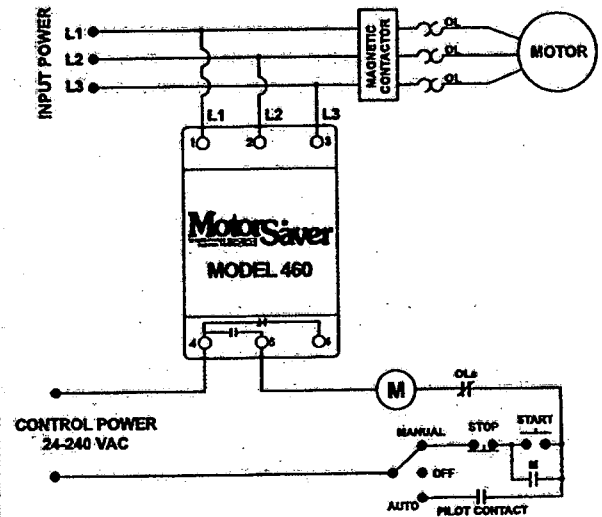
FRONT VIEW



BOTTOM VIEW



SIDE VIEW



TYPICAL WIRING DIAGRAM



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Molded Case Circuit Breakers

SELECTION

ED 125A Frame Sentron Series

Ordering Instructions

- All ED Frame Sentron circuit breakers are supplied with load side lugs. If line side lugs are required, add "L" suffix to catalog number, and breaker will be supplied with line lugs installed at no charge.
- 50°C Calibration, 400HZ - see page 111. All ED frame circuit breakers may be reverse connected.

Type ED2

Blue Label

Continuous Current Rating @ 40°C	1-Pole		2-Pole		3-Pole	
	120V AC		240V AC		240V AC	
	Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$
15	ED21B015	98.00	ED22B015	226.00	ED23B015	336.00
20	ED21B020	98.00	ED22B020	226.00	ED23B020	336.00
25	ED21B025	98.00	ED22B025	226.00	ED23B025	336.00
30	ED21B030	98.00	ED22B030	226.00	ED23B030	336.00
35	ED21B035	98.00	ED22B035	226.00	ED23B035	336.00
40	ED21B040	98.00	ED22B040	226.00	ED23B040	336.00
45	ED21B045	98.00	ED22B045	226.00	ED23B045	336.00
50	ED21B050	98.00	ED22B050	226.00	ED23B050	336.00
60	ED21B060	98.00	ED22B060	226.00	ED23B060	336.00
70	ED21B070	180.00	ED22B070	369.00	ED23B070	480.00
80	ED21B080	180.00	ED22B080	369.00	ED23B080	480.00
90	ED21B090	180.00	ED22B090	369.00	ED23B090	480.00
100	ED21B100	180.00	ED22B100	369.00	ED23B100	480.00

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight (lbs.)
ED2, ED4, ED6, HED4, HHED6		
1	30	38
2	10	25
3	10	38
CED6		
2	5	20
3	5	30

Lugs

Ampere Rating	No. of Poles	Catalog Number	Wire Range
Aluminum Body Lugs			
All 15-25A	1, 2, 3	Line/Load SA1E025	#14-#10 Cu #12-#10 Al
All 30-100A	1, 2, 3	Line Side LNE100	#10-1/0 Cu/Al
ED2, 4, CE06 30-60A	1	Load Side LD1E060	#10-#4 Cu/Al
ED2, 4, CE06 70-100A	1	Load Side LD1E100	#6-#1/0 Cu/Al
ED2, 4, 6, HED4, HHED6 30-100A	2, 3	Load Side LNE100	#10-1/0 Cu/Al
All 110, 125A	2, 3	Line/Load TA1E6125	#3-3/0 Cu #1-2/0 Al
Copper Body Lugs			
All 30-125A	1, 2, 3	Line/Load TC1ED6150	#10-1/0 Cu only
Compression Lugs			
All ED, HHED, CED		CCE125	#14-2/0

Type ED4

Blue Label

Continuous Current Rating @ 40°C	1-Pole		2-Pole		3-Pole	
	120V AC		480V AC		480V AC	
	Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$
15	ED41B015	121.00	ED42B015	409.00	ED43B015	535.00
20	ED41B020	121.00	ED42B020	409.00	ED43B020	535.00
25	ED41B025	121.00	ED42B025	409.00	ED43B025	535.00
30	ED41B030	121.00	ED42B030	409.00	ED43B030	535.00
35	ED41B035	121.00	ED42B035	409.00	ED43B035	535.00
40	ED41B040	121.00	ED42B040	409.00	ED43B040	535.00
45	ED41B045	121.00	ED42B045	409.00	ED43B045	535.00
50	ED41B050	121.00	ED42B050	409.00	ED43B050	535.00
60	ED41B060	121.00	ED42B060	409.00	ED43B060	535.00
70	ED41B070	227.00	ED42B070	537.00	ED43B070	630.00
80	ED41B080	227.00	ED42B080	537.00	ED43B080	630.00
90	ED41B090	227.00	ED42B090	537.00	ED43B090	630.00
100	ED41B100	227.00	ED42B100	537.00	ED43B100	630.00
110	—	—	ED42B110	1086.00	ED43B110	1249.00
125	—	—	ED42B125	1086.00	ED43B125	1249.00

Enclosures (Neutral Included)

Type	Catalog Number	List Price \$
1 (Surface)	E2N1S(15-100A)	117.00
1 (Flush)	E2N1F(15-100A)	117.00
3R	E2N3R(15-100A)	321.00
4-4X	ED6SS4(15-100A)	2227.00
7-9	EA (15-60A)	1371.00
7-9	EB (70-100A)	1371.00
12	E2N12 (15-100A)	199.00
1 (Surface)	CED6N1S	211.00
1 (Flush)	CED6N1F	211.00
3R	CED6N3R	568.00
12	CED6N12	352.00

Type ED6

Blue Label

Continuous Current Rating @ 40°C	1-Pole		2-Pole		3-Pole	
	347V AC		600V AC		600V AC	
	Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$
15	ED61B015	273.00	ED62B015	480.00	ED63B015	610.00
20	ED61B020	273.00	ED62B020	480.00	ED63B020	610.00
25	ED61B025	273.00	ED62B025	480.00	ED63B025	610.00
30	ED61B030	273.00	ED62B030	480.00	ED63B030	610.00
35	ED61B035	273.00	ED62B035	480.00	ED63B035	610.00
40	ED61B040	273.00	ED62B040	480.00	ED63B040	610.00
45	ED61B045	273.00	ED62B045	480.00	ED63B045	610.00
50	ED61B050	273.00	ED62B050	480.00	ED63B050	610.00
60	ED61B060	273.00	ED62B060	480.00	ED63B060	610.00
70	ED61B070	376.00	ED62B070	606.00	ED63B070	763.00
80	ED61B080	376.00	ED62B080	606.00	ED63B080	763.00
90	ED61B090	376.00	ED62B090	606.00	ED63B090	763.00
100	ED61B100	376.00	ED62B100	606.00	ED63B100	763.00
110	—	—	—	—	ED63B110	1467.00
125	—	—	—	—	ED63B125	1467.00

Note: ED frame circuit breakers qualified to UL 489 Supplement SB "Naval" - See page 111 for additional information

For CED types and all 110-125 ampere ED frames. See Note A, page 108. SWD rated.

ULCSA Certified only (Not UL)

Modifications page 111
Enclosures pages 34-40
Accessories pages 108-126

Built to order. Consult sales office for factory lead time.



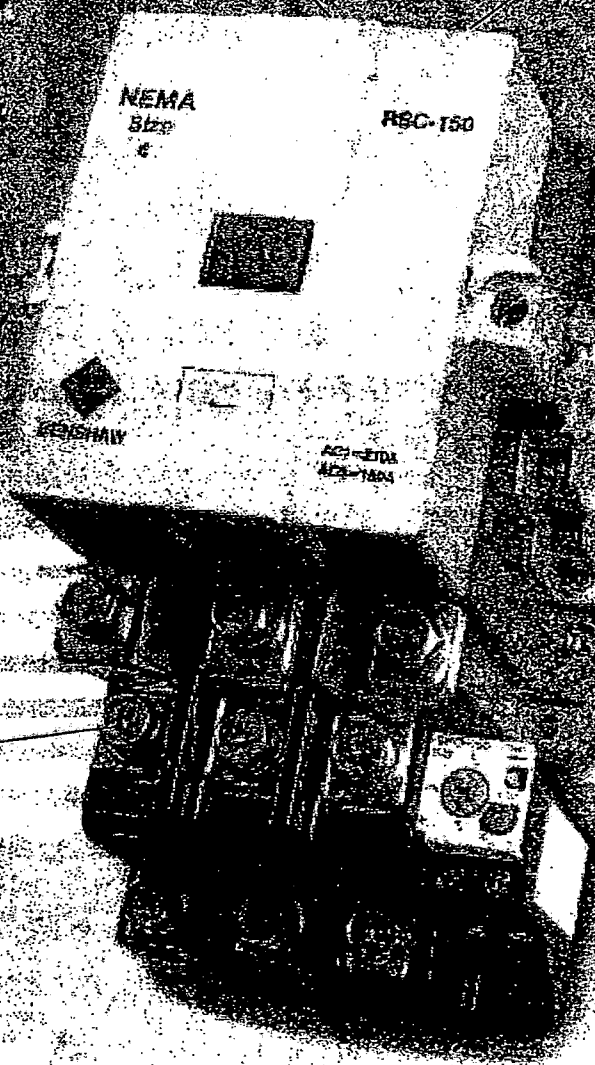
Draw out
cassette-type
coil

Integral
electrical
protection

- Phase barrier
- Surge suppression

Modular
accessories

- Auxiliary contacts
- Mechanical interlocks
- Mechanical latches
- AC/DC coils
- Reset plungers



Simple, fully
adjustable
overload relays

- ◆ Test button
- ◆ Trip-free mechanism
- ◆ Trip indicator
- ◆ Manual or auto reset
- ◆ Separate mountable to 150A

Expanded
control
functions
standard

- ◆ 2 normally open auxiliary contacts
- ◆ 2 normally closed auxiliary contacts

Guaranteed for two years.

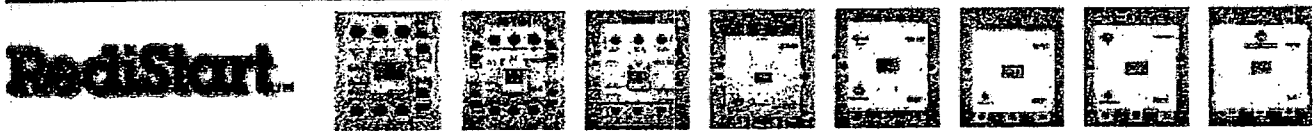
Every RS series contactor and SP series overload is guaranteed for two full years.

Other manufacturers limit their warranties to just one year. But at Benschaw, we build them better, and we guarantee them longer. We call that "the Benschaw Promise."



Select the contactor and overload relay that meets your application...

Contactor Technical information



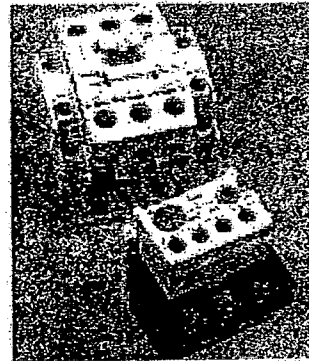
Application	20	25	30	32	40	50	60	80	100	110	135	160	180	210	230	275	350	450	600	800		
TEC-947	AC 1 Duty	20A	25A	30A	32A	50A	60A	80A	100A	110A	135A	160A	180A	210A	230A	275A	350A	450A	600A	800A		
	AC 2B Duty	200-240V	11A	13A	18A	22A	32A	40A	55A	65A	75A	85A	100A	125A	150A	180A	220A	300A	400A	630A	800A	
		380-440V	9A	12A	18A	22A	32A	40A	50A	60A	75A	85A	100A	120A	150A	180A	220A	300A	400A	630A	800A	
		500-550V	7A	12A	13A	22A	28A	32A	43A	60A	64A	75A	80A	90A	140A	180A	200A	250A	350A	500A	720A	
	AC 3 Duty	200-240V	11A	13A	18A	22A	32A	40A	55A	65A	75A	85A	105A	125A	150A	180A	250A	300A	400A	630A	800A	
		380-440V	9A	12A	18A	22A	32A	40A	50A	65A	75A	85A	105A	120A	150A	180A	250A	300A	400A	630A	800A	
		500-550V	7A	12A	13A	22A	28A	32A	43A	60A	64A	75A	85A	90A	140A	180A	200A	250A	350A	500A	720A	
	AC 4 Duty	200-220V	8A	11A	18A	18A	20A	25A	35A	50A	55A	65A	80A	93A	125A	150A	180A	220A	300A	400A	630A	
		380-440V	6A	9A	9A	13A	17A	24A	32A	47A	52A	62A	75A	90A	110A	150A	180A	220A	300A	400A	630A	
		690V	5A	9A	9A	18A	21A	25A	33A	42A	47A	52A	65A	70A	100A	120A	150A	200A	300A	420A	630A	
	UL-508	MAX. HP	115V (1PH)	0.5	0.5	1	2	2	3	5	5	7.5	7.5	10	15	15	15					
			230V (1PH)	1	2	3	3	5	5	7.5	10	15	15	20	25	30	40					
208V (3PH)			2	3	5	7.5	7.5	10	10	15	20	25	30	40	40	60	60	100	125	150	200	
240V (3PH)			2	3	5	7.5	10	10	15	20	25	30	30	40	50	60	75	100	150	200	250	
480V (3PH)			5	7.5	10	10	20	25	30	40	50	50	60	75	100	125	150	200	300	400	500	
600V (3PH)			7.5	10	15	15	20	25	30	40	50	50	60	75	100	125	150	200	300	400	500	
UL (10)		20A	25A	30A	32A	45A	50A	70A	80A	90A	100A	160A	160A	210A	230A	275A	350A	450A	660A	840A		
NEMA	MAX. HP	SIZE	00	0	1	1P	2			3		4		5	6							
		115V (1PH)	0.33		1	2	3	3		7.5												
		230V (1PH)	1		3	3	5	7.5		15												
		200V (3PH)	1.5		3		7.5		10		25				40			75		150		
		230V (3PH)	1.5		3		7.5		15		30				50			100		200		
		460/575V (3PH)	2		5		10		25		50				100			200		400		
LIGHTING DUTY (INCAN.)	120-690V	11A	13A	18A	22A	32A	40A	50A	65A	75A	85A	105A	120A	150A	180A	250A	300A	400A	630A	800A		
CAPACITOR SWITCHING	120-690V	6A	9A	12A	15A	25A	32A	45A	50A	58A	60A	64A	76A	92A	110A	152A	182A	242A	382A	485A		
RATED LIFE (x10,000)	ELECTRICAL	250	250	250	250	200	200	200	200	200	200	100	100	100	100	100	100	50	50	50		
	MECHANICAL	2500	2500	2500	2500	1500	1500	1000	1000	1000	1000	500	500	500	500	500	500	500	500	500		
INSULATION RATING	800V																					
AMBIENT TEMPERATURE RANGE	-5 TO 50°C OPERATION, -40 TO 65°C STORAGE WITHOUT DERATING																					
OPERATING TIMES (AC/DC)	CLOSING ms	10-18/50					11-20/50					16-25/25					30-50	37-60	45-60	45-68	66-70	
	OPENING ms	6-9/8-15					6-10/8-15					9-16/13-20					49-67	44-52	41-45	43-52	45-55	
RESISTANCE TO SHOCK	50g/ms OPERATION, 50g/ms MECHANICAL																					
CONDUCTOR SIZE (MAX.)	#10 AWG					#6 AWG			#4	#1 AWG					LIMITED ONLY BY CRIMP SIZE							
SWITCHING FREQUENCY (OP/HR) AC3	1800	1800	1800	1800	1800	1800	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200		
INTERRUPTING CURRENT @ 600 VAC	5KA	5KA	5KA	5KA	5KA	5KA	5KA	5KA	10KA	10KA	10KA	10KA	10KA	10KA	10KA	10KA	18KA	18KA	30KA	30KA		
MAXIMUM MAKE CURRENT (A)	240V, AC3	132	156	216	240	312	420	600	780	960	960	1050	1250	1500	1800	2500	3000	4000	6300	8000		
	480V, AC3	90	120	180	240	320	400	576	780	900	960	1050	1200	1500	1800	2500	3000	4000	6300	8000		
MAXIMUM BREAK CURRENT (A)	240V, AC3	110	130	180	200	260	350	500	650	750	800	1050	1250	1500	1800	2500	3000	4000	6300	8000		
	480V, AC3	70	90	130	200	250	320	480	650	750	800	1050	1200	1500	1800	2500	3000	4000	6300	8000		
PANEL INSTALLATION	SCREW OR DIN RAIL										SCREW											

Overload Technical Information

SurProtex™ simple, fully adjustable overload relays.

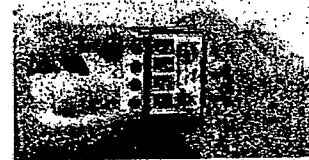
Rated Current I _N (A)	Setting Range I _{set} (A)	Overload Frame (Contact Rating)
0.14	0.1 TO 0.16	SPO-22 (RSC-9-22)
0.21	0.16 TO 0.25	
0.33	0.25 TO 0.4	
0.52	0.4 TO 0.63	
0.82	0.63 TO 1	
1.3	1 TO 1.6	SPO-40 (RSC-32-40)
2.1	1.6 TO 2.5	
3.3	2.5 TO 4	
5	4 TO 6	
6.5	5 TO 8	
7.5	6 TO 9	SPO-85 (RSC-50-85)
8.5	7 TO 10	
11	9 TO 13	
16	12 TO 18	
19	16 TO 22	
22	18 TO 26	SPO-150 (RSC-100-125)
30	24 TO 36	
34	28 TO 40	
42	34 TO 50	
55	45 TO 65	
65	54 TO 75	SPO-220 (RSC-180-220)
74	63 TO 85	
80	65 TO 100	
107	85 TO 125	
130	100 TO 160	
150	120 TO 180	SPO-400 (RSC-300-400)
200	160 TO 240	
250	200 TO 300	
350	260 TO 400	
500	400 TO 600	
660	520 TO 800	SPO-800 (RSC-600-800)

Benshaw SP overload relays integrally mount to RS contactors and provide thermal overload protection with Class 10 trip characteristics.



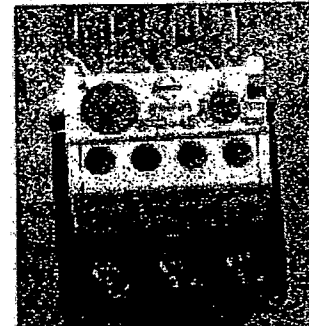
The SurProtex Overload Relay

The SurProtex overload relay can be mounted directly to the magnetic contactors without additional brackets.



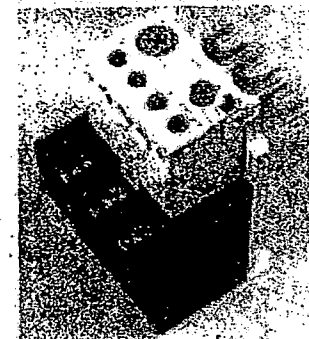
Safety Cover

A "finger-proof" safety cover prevents any contact with live parts.



Simple Adjustments

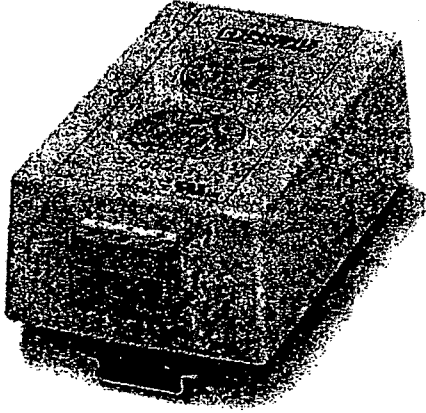
Overload adjustments are easy to access and straightforward to set.



Trip/Reset Indicator

Each overload relay has a manual trip operator and indicator flag.

► General data



Rail-mountable double socket, for mounting on 35 mm mounting rail in acc. with EN 50 022, housing color: white, with screw connection, national version: USA

Order number	5600461
Type	EM-DUO 120/15

Barcode number	4017918929930
Unit pack	1 Pcs.
Customs tariff	85366990900

► Technical data

General data	
Nominal voltage U_N	120 V AC
Nominal current I_N	15 A
For country-specific use in	USA
Color	white
Insulating material	PVC 94 V0
Ambient temperature (operation)	-40 ° C ... 70 ° C

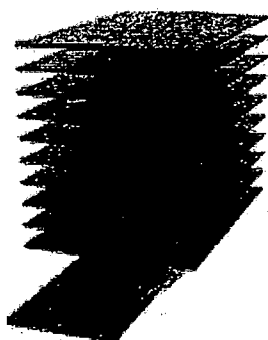


Anti-Condensation Space Heater

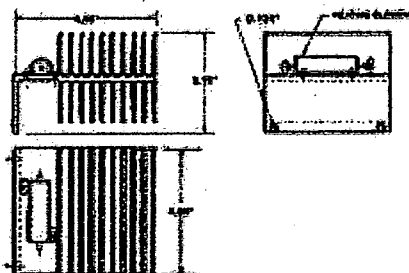
ACH-15W, ACH-30W, ACH-50W



E121431



[click to enlarge](#)



[click to enlarge](#)

Features

- Recognized, File No. E121431
- Touch Safe, will not burn skin when touched.
- Size it right and no thermostat is required.
- No moving parts to wear out.
- Compact size, small foot print.
- Corrosion resistant black anodized finish.

Specifications

- Operating voltage 120VAC.
- Current draw:
 - ACH-15W = .125 amps.
 - ACH-30W = .250 amps.
 - ACH-50W = .417 amps.
- Extruded aluminum, black anodized finish.
- Life expectancy is 20 years minimum.

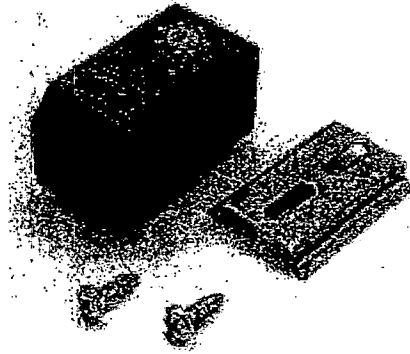
The ACH series anti-condensation space heaters are designed to maintain the temperature inside of an enclosure several degrees above surrounding ambient temperature and above the dew point. This will prevent corrosion inside due to condensation.



4949 Sunbeam Road • Building 12 • Jacksonville, Florida 32257
Phone : (904) 733-2221 or (888) 875-2221 • Fax: (904) 733-2230
www.ingramproducts.com

Thermal Management Accessories

Temperature Control Switches (Thermostats)



These easy to install thermostats are designed to regulate and monitor air temperature in switch-gear enclosures that are set up to operate with heaters, fans, filter ventilators, heat exchangers, and/or signal transmitters. Thermostat A-TEMNC is specifically designed for use with heaters (contacts close on temperature drop), while thermostat A-TEMNO is designed to control fans, filter ventilators, or for switching signal transmitters in the event of overheating (contacts close on temperature rise). Both thermostats have a bi-metallic adjustable set point range of 30 to 140° F. An additional label is provided to convert set point range to degrees Celsius. A preset label is also provided to cover the set point range label after the thermostat is put at desired temperature.

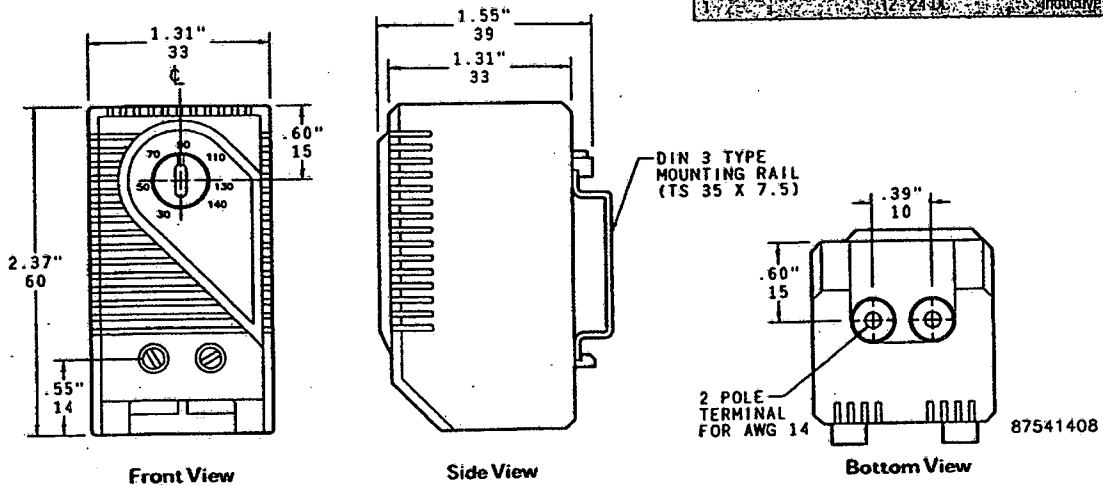
When the enclosure reaches the pre-determined set point, temperature contacts in the thermostat are activated and the fan or heater automatically begins to operate. Thermostats prolong the life expectancy of heaters and fans by curtailing their operating hours and also increase the working efficiency of electrical components by exposing them to fewer contaminants from the surrounding environment. Connections consist of tubular screw terminals for AWG 14 (0.04 in"). Provision for both panel mounting and DIN rail mounting. Housing is plastic

Industry Standards
UL94-VO
Protection rating IEC IP30
UL/cUL Component Recognized
CE



Catalog Number	Contact Type
A-TEMNC	NC (normally closed), quickacting
A-TEMNO	NO (normally open), quickacting

Switching Capacity Amp	Volts	Load
15	120 AC	Resistive
16	250 AC	Resistive
10	120-250 AC	Inductive
10	12-24 DC	Resistive
10	12-24 DC	Inductive

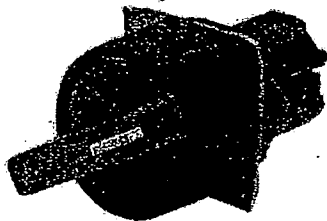


Bulletin 800E

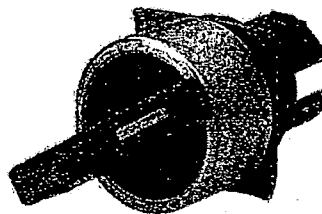
22.5 mm Push Buttons

IP66, Type 4/4X/13 (Plastic) — IP66, Type 4/13 (Metal)

3-Position Selector Switch Operators, Non-Illuminated

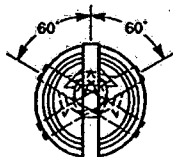


Standard Knob
Cat. No. 800EP-SM33



Knob Lever
Cat. No. 800EM-HM33

Switching Angles



Target Table and Operator Position (60° Switching Angle)					
Contact Type	Position on Mounting Latch				
N.O.	Left	X	O	O	
N.O.	Right	O	O	X	
N.C.	Left	O	X	X	
N.C.	Right	X	X	O	

Note: X = Closed/O = Open

Color	Operator Type			Standard Knob — Round		Knob Lever — Round	
	M = Maintained S = Spring Return			Plastic	Metal	Plastic	Metal
				Cat. No.	Cat. No.	Cat. No.	Cat. No.
Black knob with white insert	M	M	M	800EP-SM32	800EM-SM32	800EP-HM32	800EM-HM32
	M	M	S	800EP-SR32	800EM-SR32	800EP-HR32	800EM-HR32
	S	M	M	800EP-SL32	800EM-SL32	800EP-HL32	800EM-HL32
	S	M	S	800EP-SB32	800EM-SB32	800EP-HB32	800EM-HB32

Back-of-Panel Components, Non-Illuminated Operators

Mounting Latch

		Contact	2-Across Mounting Cat. No.	3-Across Mounting Cat. No.
		Mounting latch	800E-A2L	800E-A3L

Contact Block

		Type	Contact	2-Across Mounting Cat. No.	3-Across Mounting Cat. No.
		Standard	1 N.O.	800E-2X10	800E-3X10
			1 N.C.	800E-2X01	800E-3X01
		PenTUFF (low voltage) Ⓢ	1 N.O.	800E-2X10V	800E-3X10V
			1 N.C.	800E-2X01V	800E-3X01V

Mounting Latch and Contact Blocks Ⓢ

		Type	Contact	2-Across Mounting Cat. No.	3-Across Mounting Cat. No.
		Standard	1 N.O.	800E-2LX10	800E-3LX10
			1 N.C.	800E-2LX01	800E-3LX01
			1 N.O. - 1 N.C.	800E-2LX11	800E-3LX11
			2 N.O.	800E-2LX20	800E-3LX20
			2 N.C.	800E-2LX02	800E-3LX02
			1 N.O.	800E-2LX10V	800E-3LX10V
		PenTUFF (low voltage) Ⓢ	1 N.C.	800E-2LX01V	800E-3LX01V
			1 N.O. - 1 N.C.	800E-2LX11V	800E-3LX11V

Ⓢ Patented PenTUFF contacts supplied only with 2-across mounting, gold-plated contacts supplied only with 3-across mounting.

Ⓢ 2-across mounting latch and contact block combinations are factory assembled. When one contact block is specified, it is mounted in position 2 (right side/viewed from back). When 1 N.O. and 1 N.C. contacts are specified, the N.O. is mounted in position 2, and the N.C. is mounted in position 1 (left side/viewed from the back).

Accessories — Page 10-233
Legend Plates — Page 10-248

Approximate Dimensions — Page 10-256

Bulletin 800E

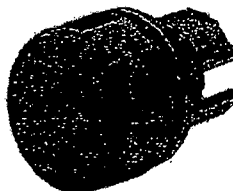
22.5 mm Push Buttons

IP66, Type 4/4X/13 (Plastic) — IP66, Type 4/13 (Metal)

Pilot Light Operators — Optically Enhanced and Diffuser Style



Optically Enhanced Pilot Light
Cat. No. 800EP-PL5

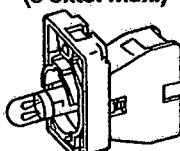
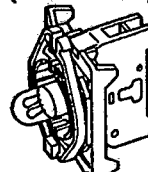


Diffuser Style Pilot Light
Cat. No. 800EM-P4

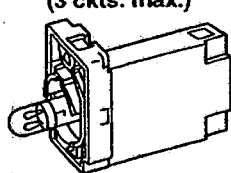
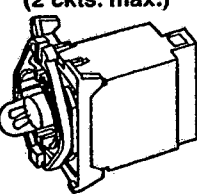
Color	Optically Enhanced — Round		Diffuser Style — Round	
	Plastic	Metal	Plastic	Metal
	Cat. No.	Cat. No.	Cat. No.	Cat. No.
Green	800EP-PL3	800EM-PL3	800EP-P3	800EM-P3
Red	800EP-PL4	800EM-PL4	800EP-P4	800EM-P4
Amber	800EP-PL5	800EM-PL5	800EP-P5	800EM-P5
No lens	800EP-P9	800EM-P9	800EP-P9	800EM-P9

Back-of-Panel Components, Illuminated Operators

Full Voltage Power Module with Latch

	Type	Volts	2-Across Mounting	3-Across Mounting
			Cat. No.	Cat. No.
 	No lamp ①	—	800E-2DL0	800E-3DL0
	Incandescent	24 AC/DC	800E-2DL3	800E-3DL3
		120 AC/DC	800E-2DL5	800E-3DL5
	LED ② (red)	24 AC/DC	800E-2DL3R	800E-3DL3R
		120 AC	800E-2DL5R	800E-3DL5R
	LED ② (green)	24 AC/DC	800E-2DL3G	800E-3DL3G
		120 AC	800E-2DL5G	800E-3DL5G
	LED ② (amber)	24 AC/DC	800E-2DL3A	800E-3DL3A
		120 AC	800E-2DL5A	800E-3DL5A

Transformer Power Module with Latch

	Type	Volts	2-Across Mounting	3-Across Mounting
			Cat. No.	Cat. No.
 	Incandescent	110/120 AC	800E-2TL5	800E-3TL5
		220/240 AC	800E-2TL7	800E-3TL7
	LED ② (red)	110/120 AC	800E-2TL5R	800E-3TL5R
		220/240 AC	800E-2TL7R	800E-3TL7R
	LED ② (green)	110/120 AC	800E-2TL5G	800E-3TL5G
		220/240 AC	800E-2TL7G	800E-3TL7G
	LED ② (amber)	110/120 AC	800E-2TL5A	800E-3TL5A
		220/240 AC	800E-2TL7A	800E-3TL7A

① Lamp must match line voltage. See replacement lamps table on page 10-247.

② LEDs are available in red, green, blue, amber, and white; color cap must match LED color.

Accessories — Page 10-233

Lamp Information — Page 10-247

Legend Plates — Page 10-248
Approximate Dimensions — Page 10-256



Piezo Warbler Sound Alarm

Our hottest seller!



Model PW120A 120VAC PW24D 24VDC PW12D 12VDC

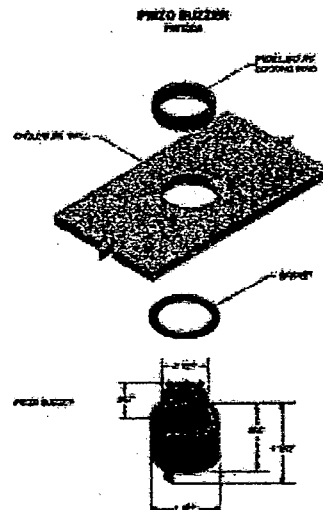


[click to enlarge](#)



(Available in Red or Black)

[click to enlarge](#)



[click to enlarge](#)

Features

- Distinctive WARBLE tone cuts through ambient noise.
- Adjustable volume damper (see photo)
- UL Recognized for use in UL Type 3, 3R, 4X, 12 and 13 environments
- Also meets NEMA 3, 3R, 4X, 12 and 13 requirements
- All solid state construction equals reliability
- Encapsulated for durability and corrosion resistance
- Molded from tough GE Valox
- Low power consumption
- Installs in 1.125" hole or 3/4" standard knock out
- Comes with installed gasket

Specifications

- Sound output: 95 dB min. @ 2 feet
- Resonant frequency 2.9± 0.5kHz
- Operating voltage:
 - Model PW120A: 120VAC (40 to 130VAC)
 - Model PW24D: 24VDC (10 to 28VDC)
 - Model PW12D: 12VDC (4 to 15VDC)
- Maximum current draw:
 - Model PW120A: 120VAC=40mA
 - Model PW24D: 24VDC=30mA
 - Model PW12D: 12VDC=20mA
- Operating temperature: -20°C to 50°C
- Electrical connections: 1/4" Quick connect terminals
- Fits panels up to 1/4" thick

The PW series of panel mount piezo sound alarms was designed to be a cost-effective audible alarm for use in industrial control systems. It is molded from tough GE Valox, comes in red or black, is weather-proof, volume adjustable and suitable for use in corrosive environments both outdoor and indoor.



PANEL MOUNT ALARM LIGHT

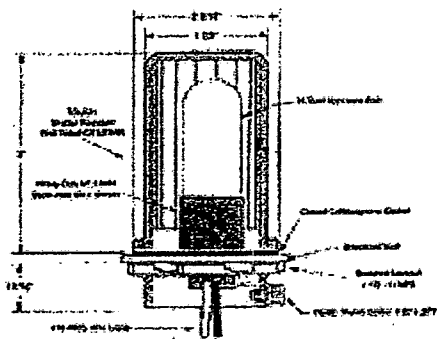
MX-15



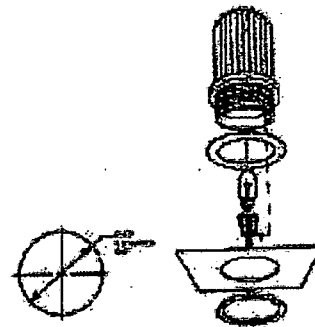
E121431



[click to enlarge](#)



[click to enlarge](#)



[click to enlarge](#)

Features

- Molded from one-piece tough GE Lexan®.
- UL Recognized for use in UL Type 3, 3R, 4, 4X, 12 and 13 environments.
- Also meets NEMA 3, 3R, 4, 4X, 12 and 13 requirements.
- High intensity, visible in direct sunlight.
- Clear 15-watt, 120-volt light bulb included.
- Fast simple one hole mounting using standard 1 1/2" knock out.
- Light bulb socket comes with 36" long #18 AWG stranded wire.
- In stock, shipped within 24 hours.

Specifications

- UL Recognized for use in UL Type 3, 3R, 4X, 12 and 13 environments.
- Up to 15-watt maximum incandescent light bulb.
- Light bulb socket comes with 36" long #18 AWG stranded wire.
- Install dimensions are 3" high X 2.187" diameter @ base.

The MX-15 was designed for use as an alarm beacon for use on smaller, less expensive control panels. Most often used with our SSF15OW, solid state flasher.



4949 Sunbeam Road • Building 12 • Jacksonville, Florida 32257
Phone : (904) 733-2221 or (888) 875-2221 • Fax: (904) 733-2230
www.ingramproducts.com



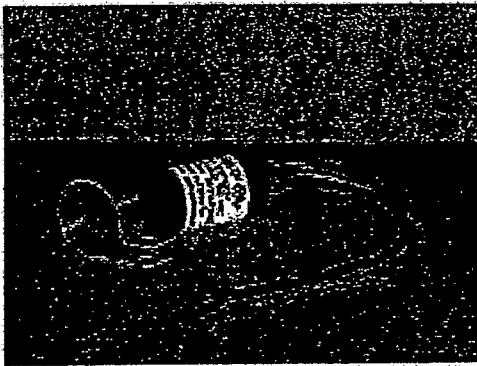
INGRAM
PRODUCTS, INC.

SOLID STATE FLASHER

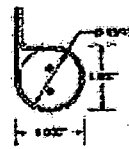
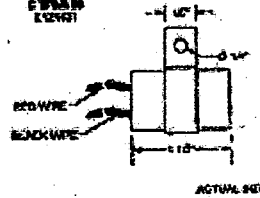
SSP-150W



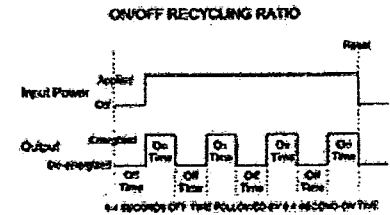
E121431



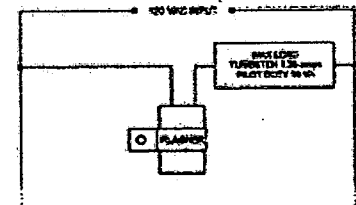
UL E121431



ACTUAL SIZE



CONNECTION



[click to enlarge](#)

[click to enlarge](#)

[click to enlarge](#)

Features

- Full wave 120VAC output = full brilliance.
- Suitable for use with tungsten, resistive or inductive loads.
- Totally encapsulated corrosion resistant.
- Mounting strap included.
- Can directly flash a 150-watt light bulb
- In stock, shipped within 24 hours

Specifications

- Operating voltage: 120VAC
- Maximum tungsten load: 1.25 amps.
- Maximum resistive load: 1.25 amps.
- Maximum inductive load: 10VA.
- Flash rate: 75 flashes per minute.
- On off ratio: on time is $\leq 50\%$.
- Physical size: .937" diameter X 1.5" long.
- Operating temperature -20°C to 40°C .
- 6" #20 AWG wire leads.

This highly reliable encapsulated solid state flasher is designed for use with incandescent, resistive and inductive loads. It can be used to directly flash a 150-watt incandescent light bulb. It also may be used to drive a relay or contactor coil in order to handle larger loads.

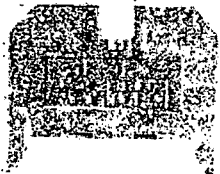


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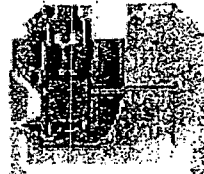
Through-type terminals



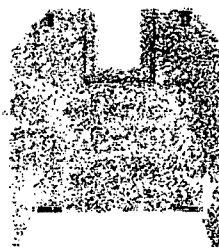
2.5 mm² / 6 mm
 8WA1 011-1DF11, beige
 8WA1 011-1BF21, red
 8WA1 011-1BF22, orange
 8WA1 011-1BF23, blue
 8WA1 011-1PF11, green/yellow
 8WA1 011-3DF21, 3-pole
 8WA1 011-ODF22, 10-pole with inscription
 8WA1 011-ODF21, 10-pole without inscription



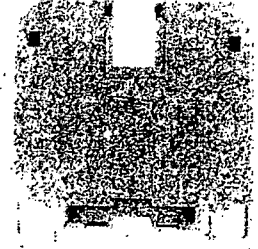
4 mm² / 6.5 mm
 8WA1 011-1DG11, beige
 8WA1 011-1BG11, blue
 8WA1 011-1BG21, red
 8WA1 011-1BG22, orange
 8WA1 011-1PG11, green/yellow
 8WA1 011-3DG21, 3-pole
 8WA1 011-ODG22, 10-pole with inscription
 8WA1 011-ODG21, 10-pole without inscription



6 mm² / 8 mm
 8WA1 011-1DH11, beige
 8WA1 011-1BH23, blue
 8WA1 011-1PH11, green/yellow
 8WA1 011-3DH21, 3-pole



16 mm² / 10 mm
 8WA1 204, beige
 8WA1 011-1BK11, blue
 8WA1 304, 3-pole

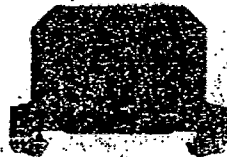


35 mm² / 16 mm
 8WA1 205, beige
 8WA1 011-1BM11, blue
 8WA1 305, 3-pole

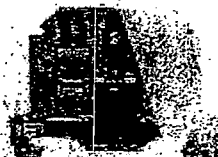
PE terminals with connection to standard mounting rail



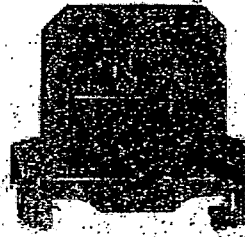
2.5 mm² / 6 mm
 8WA1 011-1PF01, 1 connection
 8WA1 011-1PF00, 2 connections



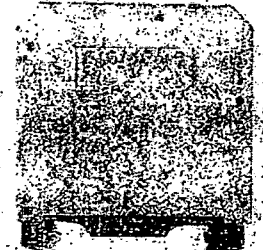
4 mm² / 7.2 mm
 8WA1 011-1PG01, 1 connection
 8WA1 011-1PG00, 2 connections



6 mm² / 8 mm
 8WA1 011-1PH00, 2 connections
 8WA1 011-1PH01, bare

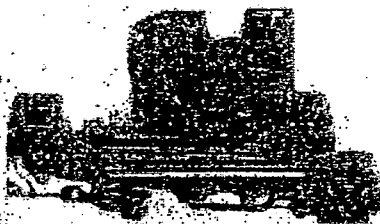


16 mm² / 12 mm
 8WA1 011-1PK00, 2 connections



35 mm² / 16 mm
 8WA1 011-1PM00, 2 connections

Insta or three-tier terminals

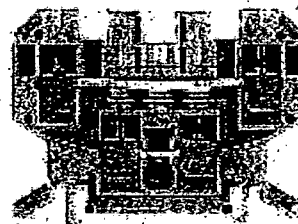


2.5 mm² / 6 mm
 8WA1 011-3JF20
 8WA1 011-3JF16
 8WA1 011-3JF17
 8WA1 011-3JF18

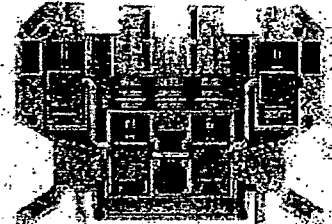
Version
 PE, L, NT
 PE, L, L
 PE, L, N,
 L, L

PE, L, NT

Two-tier terminals

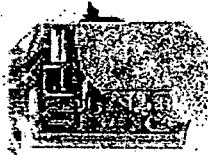


4 mm² / 6.5 mm
 8WA1 011-2DG11, 2-pole
 8WA1 011-2BG11, 2-pole blue

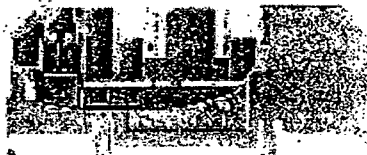


4 mm² / 6.5 mm
 8WA1 011-6DG11, 1-pole
 8WA1 011-6BG11, 1-pole blue

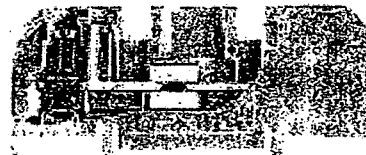
Isolating terminals, measuring transformer terminals, fuse terminals



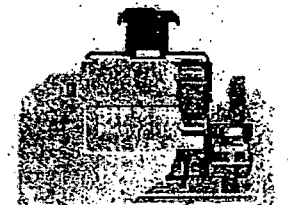
2.5 mm² / 6 mm
 8WA1 501, screw/screw
 8WA1 511, screw/solder



6 mm² / 8 mm
 8WA1 011-1MH10, without test sockets



6 mm² / 8 mm
 8WA1 011-1MH11, without test sockets
 8WA1 011-1MH15, with test sockets



2 x 1.5 mm² / 10 mm
 8WA1 011-1SF12

APPENDIX V

PERMANENT RAIN GAUGE SPECIFICATIONS





Texas Electronics, Inc.

The Gold Standard in Weather Instrumentation Since 1957

Rain Gauge Tipping Bucket

TR-525USW Rainfall Sensor



Description

The Texas Electronics, Inc. TR-525USW Rainfall Sensor is a remote tipping bucket style rain gauge that measures the amount of liquid precipitation.

The Rain Gauge is a freestanding receptacle for measuring precipitation. It contains an open top, which allows rainfall to fall into the upper portion, which is called the collector. Collected water is funneled to a mechanical device (tipping bucket), which incrementally measures the rainfall accumulation and causes a momentary closure of a switch. As water is collected, the tipping bucket fills to the point where it tips over. This action empties the bucket in preparation for additional measurement. Water discharged by the tipping bucket passes out of the rain gauge with no need for emptying.

The TR-525USW was specifically designed to meet the National Weather Service's requirements for rainfall measurement.

Features & Benefits

- Meets government requirements for an 8" collector
- Interfaces to virtually all data acquisition systems
- Knife-edge collector optimizes rainfall catch
- Exceptional splash-out protection reduces wind errors
- Easy installation and maintenance
- Over 30 years in production
- Lightweight spun Aluminum Exterior
- Anodized aluminum collector for weather resistance
- Integral Bubble Level

Specifications

Resolution:	0.01" English
Accuracy:	1.0% up to 2"/hr (50 mm/hr)
Collector diameter:	8.00" (203 mm) with knife-edge
Funnel depth:	6.4" (163 mm)
Splash out protection:	>2" (50 mm)
Operating Temp:	32 to 125° F (0 to 50° C)
Storage Temp:	-40 to 160° F (-40 to 70° C)
Humidity Limits:	0 to 100%
Weight:	2.5 lbs. (1.2 kg) 6 lbs. (2.7 kg) shipping
Height:	11" (280 mm)
Cable:	25', 22 gauge 2 conductor
Switch:	Momentary potted reed switch
Switch rating:	30 VDC @ 2 A, 115 VAC @ 1 A
Switch Closure Time:	135 ms
Bounce Settling Time:	0.75 ms
Pivot:	Hardened SS Jewel & Pivot
Bucket:	Black ABS injection molded
Level:	Integral Bubble Level
Warranty:	3 years

Installation & Maintenance

Installation consists of attaching the three sensor support legs to a firm platform (such as our MB-525 Mounting Base). Pole mounting on the mast of a weather station is available by securing to the included side bracket.

Maintenance consists of routine cleaning of debris from the filter screen, and occasional calibration verification with our FC-525 Field Calibration Kit.

Ordering Information

Model #	Description
TR-525USW	Rain Gauge, 8.00" collector, English

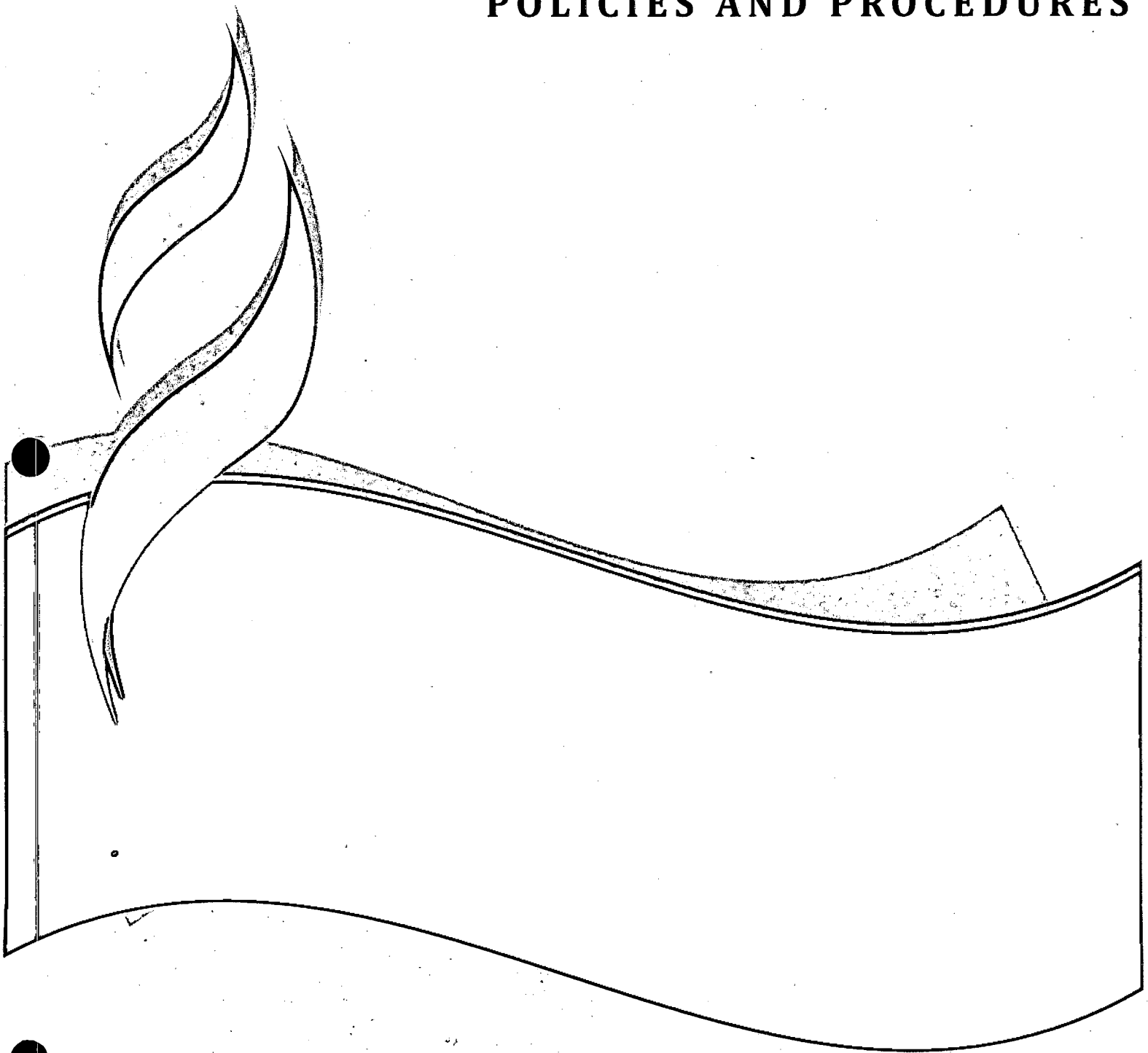
Optional Parts / Accessories

HOBO	Event Datalogger and Software
MB-525	Pole Mounting Base
FC-525	Field Calibration Kit
BB-525	Bird Repellent
HT-525	Heater, 120 VAC
Cable	Additional Cable

Texas Electronics, Inc.
5529 Redfield Street • Dallas, TX 75235
Tel.214.631.2490 • Fax.214.631.4218 • 800.424.5651
www.texaselectronics.com • email: info@texaselectronics.com

APPENDIX W

POLICIES AND PROCEDURES



CITY CORPORATION
RUSSELLVILLE, ARKANSAS, WATER AND SEWER SYSTEM

POLICIES AND PROCEDURES
FOR
EXTENSIONS OF THE WATER AND SEWER FACILITIES

To assure the orderly, reliable, economical and safe operation of the water and sewer system, it is necessary to establish, promulgate, and enforce a uniform set of policies and procedures for the design, construction and acceptance for service and maintenance of extensions to the system. This document consists of three sections:

- Policies and Procedures
- Design Criteria and Plan Requirements
- Standard Specifications and Details

These policies and procedures, Design Criteria and Plan Requirements, and Standard Specifications and Details shall apply uniformly to all proposed water distribution main or sewage collection main extension plans approved by City Corporation from and after the date of approval of this document.

Approved by The City Corporation Board of Directors

By:  James Biggers, Chairman

Date: March 20, 1995

Approved by the Arkansas Department of Health May 22, 1995.

POLICIES AND PROCEDURES

1. Service Policy:

The tapping of a water distribution main for water service, or connection of a building sewer to a sewage collection main will be permitted only to those water or sewer mains which have been officially accepted by City Corporation for service and maintenance. City Corporation will determine the location, size, and other details of requested water or sewer connections.

The property to be served by a proposed water or sewer service connection must have frontage on the public road or street, or utility easement in which the water or sewer main is constructed, and the water or sewer main must be adjacent to the property being served. If a water or sewer main is not adjacent to the property proposed for service, the property owner (or developer) shall construct an extension of the water or sewer main to a point adjacent to the property proposed for service.

2. Policy on Extensions of Water or Sewer Mains:

City Corporation will determine the size, location, materials and other details for extensions to the water distribution or sewage collection systems. The criteria for this determination includes the Design criteria and Standard Specifications in this document, and other generally accepted engineering practices.

All plans for proposed extensions of the water distribution system, sewage collection system, or appurtenances to either system, shall be prepared by and bear the stamp of a Professional Engineer currently registered by The Arkansas State Board of Registration for Professional Engineers and Land Surveyors. The engineering design and construction inspection for proposed water main or sewer collection system extensions shall be performed by an engineer retained or employed by the individual or developer desiring the extension.

All plans for construction of proposed extensions of the water distribution system or sewage collection system must be approved by City Corporation and the Arkansas State Department of Health before construction of the proposed extensions may commence. Approval of extension plans by City Corporation is subject to the standards and criteria included in this document.

The extension of water or sewer facilities shall include the execution of a Water Main Extension Agreement, or Sewer Main Extension Agreement, as appropriate. This agreement is prepared by City Corporation for execution by the individual or developer constructing the water or sewer main extension. A sample agreement form for water main extensions, and for sewer main extensions, is included in this document.

The total cost of construction, including engineering design and Health Department review fees, shall be paid by the individual or developer desiring water or sewer service. Any financial participation by City Corporation will be as approved in writing prior to or coincident with approval of the proposed plans, and will be limited to oversizing of mains for future extensions, or extensions in addition to those required to provide the service requested, as determined by City Corporation to be necessary to improve the level of service in the community. All construction of approved water or sewer main extensions shall be by contractors employed by the individual or developer desiring service. City Corporation will not provide any construction services or materials for extensions of water or sewer mains, unless specifically approved in writing.

3. Policy on Service Connections to Newly Constructed Water or Sewer Main Extensions:

Requests for water or sewer service connections will only be approved when the water or sewer main to be tapped for service has been accepted for service by City Corporation. The following is a list of conditions for acceptance for service by City Corporation.

1. The main extension must have been constructed in accordance with plans which have been previously approved by City Corporation and the Arkansas Department of Health.
2. All construction and cleanup is complete, and all specified tests have been satisfactorily completed, with documentation in City Corporation files.
3. As constructed plans and construction cost statements have been received by City Corporation, and have been field checked for accuracy by City Corporation.
4. All easements and / or street right of way dedications have been provided to City Corporation, and filed for record in the Courthouse.
5. All appropriate agreements have been executed by the developer, and all applicable prorata rebates have been collected from the developer. Execution of the appropriate extension agreement by City Corporation constitutes acceptance for service.

DESIGN CRITERIA AND PLAN REQUIREMENTS

1. The following requirements and standards are incorporated by reference in this design criteria:
 - City of Russellville Ordinance No. 1,458, concerning water and wastewater extensions outside the City Limits of Russellville.

- Fire Protection Policy, A Joint Agreement between the Russellville Fire Department and City Corporation, dated January 29, 1993.
 - City of Russellville Ordinance No. 1,401, Land Subdivision and Development Code.
 - Rules and Regulations pertaining to Public Water Systems, as issued by The Arkansas Department of Health on January 29, 1991.
2. Unless specifically approved in writing otherwise, or authorized by this design criteria, all extensions to the water distribution system, or appurtenances, shall be designed as recommended in Recommended Standards for Water Works, (1992), as issued by the Great Lakes - Upper Mississippi River Board of State Public Health and Environmental Managers.
 3. Unless specifically approved in writing otherwise, or authorized by this design criteria, all extensions to the sewage collection system, or appurtenances, shall be designed as recommended in Recommended Standards for Wastewater Facilities (1990), as published by the Great Lakes - Upper Mississippi River Board of State Public Health and Environmental Managers.

City Corporation will promptly review and either approve as submitted, or request changes in writing, plans submitted for review. If City Corporation does not either approve submitted plans, or request changes in writing, within thirty (30) days of submittal, the plans shall be assumed to be approved as submitted.

4. Water Extension Design Criteria:

The pipe size of proposed water main extensions shall be at least as large as the minimum specified in the Fire Protection Policy.

Water main extensions proposed to serve more than one existing or proposed lot or parcel shall also include the construction of a water service line and meter box setting for each anticipated lot or parcel. Water main extensions requiring future road crossings by City Corporation crews will not be approved, except in extraordinary situations.

A minimum separation of 10 feet horizontal, and 1.5 feet vertical shall be maintained between water mains and sewer mains. Except for extraordinary situations the water main shall be at least 1.5 feet higher than the sewer main.

5. Sewer Extension Design Criteria:

All sewer mains must be constructed on a tangent (straight) horizontal alignment and on a constant grade from manhole to manhole.

All sewer mains must begin and end with a standard manhole. Sewer mains ending in cleanouts will not be approved.

All sewer main extensions shall be a minimum of 8 - inch inside diameter pipe, with the following exception:

- A sewer main constructed of 6 - inch inside diameter pipe will be approved if the extension cannot be extended in the future, and further provided that a maximum of eight (8) single family residential dwellings, or the hydraulic equivalent, will be served by the proposed 6" extension.

A wye shall be installed for the future connection of a sewer service line for each lot or parcel of property anticipated to be served by the proposed extension. Where lots or parcels anticipated to be connected to a proposed sewer main extension are located across an existing or proposed paved street or road from the sewer main, a sewer service stub extending to the property line of the lot to be served shall be constructed coincident with the sewer main construction.

A minimum separation of 10 feet horizontal, and 1.5 feet vertical shall be maintained between water mains and sewer mains. Except for extraordinary situations the sewer main shall be at least 1.5 feet lower than the water main.

Water Main or Sewage Collection System Extension Plan Criteria:

Proposed plans for extensions to the water distribution system or sewage collection system shall be prepared on reproducible media 24" x 36" in size, with the plan of the proposed extension drawn to scale, at a minimum scale of 1" = 100'. The plan of the proposed extension shall indicate the property lines, legal description and dimensions of the property proposed to be served. The plan sheet shall also include a vicinity map of scale 1" = 2,000' or larger showing the area of the City where the proposed extension is located.

Water distribution or sewage collection systems proposed to serve properties which are subject to the approval of the Russellville Planning Commission shall include a copy of the approved preliminary plat or site plan, or other evidence of prior Planning Commission approval. All proposed plans for water distribution main extensions shall be submitted with evidence of prior approval of the Russellville Fire Department.

The details for construction of the proposed water distribution or sewage collection extension shall be the City Corporation Standard.

Details, unless departures to these standard details are specifically approved in writing by City Corporation. Drawings of standard details need not be included with proposed plans for extensions; instead the proposed extension plans may include notes incorporating these City Corporation Standard Details by reference.

Proposed plans for sewage collection main extensions shall include a profile of the proposed sewer main drawn to the same horizontal scale as the plan drawing, with the vertical information drawn at an exaggerated vertical scale of 1" = 10' or 1" = 5'. All vertical information must be referenced to National Geodetic Vertical Datum of 1929, commonly referred to as "MSL datum". Proposed sewage collection main extension plans prepared utilizing assumed datum will not be accepted for review.

A minimum of five (5) sets of plans shall be submitted to City Corporation for review. Three (3) sets of the approved plans, bearing the approval stamp of City Corporation, will be returned to the submitting engineer.

The submitting engineer shall be responsible for submitting the extension plan as approved to the Arkansas State Department of Health for further review. Proposed extension plans are not approved for construction until approved in writing by City Corporation and the Arkansas State Department of Health, and other agencies having jurisdiction.

Easements and Rights-of-Way for Water and Sewer Mains:

All water distribution main or sewage collection main extensions shall be constructed in dedicated public rights-of-way or in easements that grant the City of Russellville the right to own and maintain a water distribution or sewage collection main. a sample water distribution main easement and sewage collection main easement is included in the Appendix to this Policies and Procedures section.

Inspection and Administration of Construction of Approved Extensions:

The submitting engineer whose stamp appears on approved plans for water distribution or sewage collection main extensions (The Engineer of Record) shall be responsible for inspection and administration of the construction of the proposed extensions. The Engineer of Record shall be responsible for ensuring that the proposed extension is constructed of materials and procedures, and to the specifications and details as approved by City Corporation and the Arkansas Department of Health.

On completion of construction and testing of the extension, the Engineer of Record shall make revisions to the plans to reflect actual dimensions and configurations of facilities as constructed,

and otherwise revise the plans to reflect the actual installation. The "as constructed" plan shall include the location of and reference dimensions for all service points for future connections to the water and sewer mains. The Engineer shall submit two (2) copies of the "as constructed" plans to City Corporation promptly on completion of all construction and testing.

Included with the "as constructed" plans shall be an itemized statement of the cost of construction of the water or sewer main extension.

APPENDIX

1. Ordinance 1458
2. Fire Protection Policy
3. Water Distribution Main Extension Agreement
4. Water Distribution Extension Offsite Service Agreement
5. Sewage Collection Main Extension Agreement
6. Sewage Collection Extension Offsite Service Agreement
7. Right-of-Way Permit - Water
8. Right-of-Way Permit - Sewer

ORDINANCE NO. 1458

AN ORDINANCE ADOPTING CITY CORPORATION POLICY GOVERNING WATER AND WASTEWATER EXTENSIONS OUTSIDE THE CITY LIMITS AND APPROVING EXISTING WATER AND WASTEWATER EXTENSIONS, DECLARING AN EMERGENCY AND FOR OTHER PURPOSES

WHEREAS, the Board of Directors for City Corporation (City of Russellville Water & Sewer Company) and the City Council for the City of Russellville recently recognized the need for the establishment of a policy governing the extension of water and sewer services outside the corporate limits of the City of Russellville; and

WHEREAS, in January 1994 the Board of Directors of City Corporation appointed a committee made up of knowledgeable individuals representing City government and the business community; and

WHEREAS, with the assistance of the aforementioned committee, the City Corporation Board of Directors has adopted the policy attached hereto known as the policy effecting "City Corporation Water & Wastewater Extensions Outside City Limits"; and

WHEREAS, the City Council of the City of Russellville has determined that it is appropriate for the City Council to adopt this policy as being the policy governing such water and sewer line extensions, along with other applicable City Ordinances and State laws; and

WHEREAS, the City Council has also determined that it is appropriate to approve all water and sewer service lines currently in place providing City Corporation water and sewer service to

individuals, businesses, industries, and governmental entities located outside the city limits of the City of Russellville.

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Russellville, Pope County, Arkansas, that:

Section 1: The City Corporation (Russellville Water & Sewer System) line extension policy approved by the City Corporation Board of Directors on March 9, 1994, a copy of which is attached hereto, is hereby approved by the City Council of the City of Russellville. The attached document is adopted by reference and incorporated herein as if set out herein word for word.

Section 2: Persons, businesses, industries, or governmental entities desiring to receive water or sewer service line extensions from City Corporation, outside the corporate limits of the City of Russellville, shall follow the aforementioned policy. This policy requires that no water or sewer line extensions shall be allowed outside the city limits without the approval of the Russellville City Council, Russellville Planning Commission, City Corporation, and the Arkansas Department of Health.

Persons desiring approval of water or sewer line extensions shall petition the Russellville Planning Commission for such services. Prior to the filing of the petition, the applicant shall receive approval for the service from the City Corporation Board of Directors. Such approval shall be evidenced by a letter from City Corporation signed by the City Corporation General Manager or other designated representative. In considering the application, the

Planning Commission shall ensure that the provisions of the aforementioned policy are complied with together with the City Subdivision and Development Code, and other applicable City ordinances and State laws.

If the Planning Commission, after considering the aforementioned policies, ordinances, and laws, determines that it is in the best interest of the citizens of the City of Russellville for water or sewer service line extensions to be provided to the applicant, then the Commission shall approve said application by majority vote. In considering the applications for water or sewer service, due consideration shall be given to the cost, if any, to the current customers of City Corporation, as well as the impact the proposed service shall have on the entire water and sewer system, including, but not limited to, the water treatment plant and the wastewater treatment plant. The granting of the service outside the city limits to an applicant or proposed customer outside the city limits shall not be deemed to guarantee service to the applicant or proposed customer on a permanent, indefinite basis. Said service shall only be continued for as long as it is found to be in the best interest of the citizens of Russellville, and economically feasible as determined by the City Corporation Board of Directors and the City Council of the City of Russellville.

After approval by the Planning Commission, the application shall be forwarded to the Russellville City Council together with a proposed ordinance prepared by the applicant. The proposed

ordinance shall contain and provide for all the information required by the applicable policies, ordinances, and State laws. If the City Council determines that it is in the best interest of the citizens of the City of Russellville for the application to be approved, then the ordinance shall be passed by a majority vote of the City Council.

Section 2: All water and sewer service lines currently providing service to individuals, businesses, industries, and governmental entities outside the city limits of the City of Russellville, having been put into place prior to the adoption of the aforementioned policy, shall remain in operation and are hereby approved. No future water or sewer service lines shall be extended outside the city limits until the aforementioned policy, ordinances, and State laws have been complied with, and appropriate approval has been obtained as evidenced by the passage of an ordinance.

Section 3: An emergency is hereby declared and this ordinance being necessary for the preservation of the public peace, health and safety shall be in full force and effect from and after its passage this 31 day of March, 1994.


WOODY HARRIS, MAYOR

ATTEST:


HELEN PRICE, CITY CLERK

revised 3/29/94

**CITY CORPORATION
WATER AND WASTEWATER EXTENSIONS
OUTSIDE CITY LIMITS**

The purpose of this policy is to establish guidelines for extending water and wastewater services outside the corporate limits of the City of Russellville, Arkansas to include, but not necessarily limited to:

Provide an adequate infrastructure requirement for developers that will minimize future upgrading of these developments in the event the area is annexed.

Provide a rational manner of interfacing other water systems with the Russellville Water System in order to promote better fire protection planning and avoid legal confrontations over service territories.

Provide an equitable cost sharing of improvements, when required, as the service area extends outward from the City limits and not place a financial burden on the citizens of Russellville.

Provide City Corporation with an acceptable means of collecting for sewer service without Russellville Water service.

Provide a means of charging for allocation of wastewater treatment capacity by users outside the City boundaries.

All extensions shall be consistent with the Land Subdivision and Development Code, as adopted by the City Council on July 9, 1992 and effective January 1, 1993. All regulations and policies that govern line extensions inside the City limits also apply outside the City limits. All appropriate approvals must be obtained by the parties responsible for the line extension. No water or sewer extensions outside the City limits shall be allowed without the following approvals:

1. City of Russellville, City Council
2. City of Russellville, Planning Commission
3. City Corporation
4. Arkansas Department of Health

Water Line Extension to Single Customer (Non-Development)

1. The line shall be sized for fire protection. Customer(s) shall bear all extension costs. Single line customers are not eligible for the recovery of any of their construction costs through contract agreement provision normally extended to developments.

Water Line Extensions for Developers

1. Water service in developments shall be solely served by the Russellville Water System. No splitting of service with another water system in the same development will be permitted.
2. If improvements not including lines and isolation valves are required to properly serve the area, the City Corporation engineer shall determine the improvements required to serve both the development and the adjacent areas that should be planned for future connections. The developer shall pay a pro-rata share of the construction costs for the facilities and related improvements required to serve the proposed development based on the capacity required to serve the proposed development as it relates to the total capacity of the facility, and City Corporation shall bear the remaining costs, upon City Corporation Board of Director approval for City Corporation's contribution. Future developments that connect within ten (10) years of completion of said improvements shall pay a pro-rata share of the construction costs based on the capacity required by the future development as it relates to the total capacity of the facility.
3. The system must provide fire protection capability in accordance with the then current Russellville Fire Protection Policy, except that flows at system connection are not mandated.

Sewer Line Extensions to Single Customer (Non-Development)

1. The customer shall bear all extension costs. If the customer is not served by the Russellville Water System, the customer is responsible for and shall obtain an agreement from the water system they are served by for the collecting of monthly sewer service charges. Said agreement shall be in a form acceptable to and provided by City Corporation. Single line customers are not eligible for the recovery of any of their construction costs through contract/agreement provisions

normally extended to developments.

Sewer Line Extensions for Developers:

1. The developer shall bear all extension costs. The developer shall also pay a pro-rata share of the cost of construction for a proposed Wastewater Treatment Plant expansion based on the capacity that will be required for the proposed development as it relates to the total capacity of the treatment plant expansion, either as a lump sum or as a connection fee in an amount and manner approved by the City Corporation Board of Directors and the City Council.
2. If the development is not served by the Russellville Water System, the developer is responsible for and shall obtain an agreement from the water system they are served by for the collecting of monthly sewer service charges. Said agreement shall be in a form acceptable to and provided by City Corporation.

This policy shall not constitute an approval procedure of any line extension outside the corporate limits of the City of Russellville without the proper review, consideration and approval of the appropriate agencies and shall not be deemed to create any rights to water and sewer services to parties outside the city limits of Russellville.

FIRE PROTECTION POLICY
A JOINT AGREEMENT BETWEEN
THE
RUSSELLVILLE FIRE DEPARTMENT
AND
CITY CORPORATION

Revised January 29, 1993

The fire protection design policy for the City of Russellville is as follows:

GENERAL

Flow criteria, as stated herein, are intended for the purpose of sizing mains for extensions from existing facilities where practical (i.e. where the system is capable of delivering the required pressures and flows) and for the design of large system improvements.

New water line extensions and Fire protection facilities, such as mains and hydrants, shall be in working order and have been accepted by the City prior to building permits being issued in a new development.

RESIDENTIAL

1. In residential areas a public main not less than six (6) inches is required for fire hydrant service and should have a minimum of 750 gpm at 20 psi residual pressure.
2. Main extensions along through streets (primary mains) that connect other residential areas shall not be less than eight (8) inches.
3. Hydrant spacing in residential areas containing one and two family dwellings not exceeding two stories in height:
 - A. Through Streets: Maximum distance measured along the curb line between hydrants should not exceed 850 feet.
 - B. Dead End Streets and Cul-de-sacs: The last hydrant in the cul-de-sac should be located 250 feet plus or minus 50 feet from the farthest building set back line at the end of the street. The next nearest hydrant outside of the dead end street should be within 700 feet of the last hydrant.

4. Hydrant spacing in residential areas containing buildings having three or more living units, or residential units exceeding three stories in height:
 - A. Through Streets: Maximum distance between hydrants should not exceed 350 feet.
 - B. Dead End Streets and Cul-de-sacs: The last hydrant in the cul-de-sac should be located 250 feet plus or minus 50 feet from the farthest building set back line at the end of the street. The next nearest hydrant outside of the dead end street should be within 500 feet of the last hydrant.
5. Where at all possible, fire hydrants should not be located on dead end mains. Exceptions should be limited to cul-de-sacs as outlined above, and mains which are planned for future extensions.

AREAS OTHER THAN RESIDENTIAL

1. Public mains shall be designed to provide adequate fire flow requirements, but not be sized less than eight (8) inch.
2. Through Streets: Maximum distance between hydrants shall not exceed 500 feet and should have a minimum of 1,000 gpm at 20 psi residual pressure.
3. Dead End Streets and Cul-de-sacs: The last hydrant in the cul-de-sac should be located 250 feet plus or minus 50 feet from the farthest building set back line at the end of the street. The next nearest hydrant outside of the dead end street should be within 500 feet of the last hydrant.
4. Buildings larger than 15,000 square feet such as commercial, industrial and residential buildings other than one and two family dwellings, that are located farther than 150 feet from a public fire hydrant system shall be provided with the required minimum number of fire hydrants and be connected to a water system capable of supplying the fire flow as determined by an ISO review by the Fire Chief. The location and number of such on-site hydrants shall have a hydrant available for distribution of hose to any portion of any building on the premises at distances not to exceed 500 feet. Where at all possible, this should be a looped system.
Refs: Arkansas State Fire Code, Sec.18.201,C.
5. Along major arterial streets that are outside residential areas and are provided with four (4) or more traffic lanes, which are divided, hydrants shall be spaced every 500 feet on each side of the street and be arranged on an alternating basis. Neither City Corporation nor the City of Russellville

shall be responsible for the cost of installation of water main extensions along new public funded street projects in undeveloped areas.

As these areas develop, each developer shall bear the cost of water main extensions to the limits of their development.

HYDRANT SPECIFICATIONS

1. All fire hydrants shall be AWWA approved and shall meet the following criteria:

A. Hydrants shall be the three-way type with two 2½ inch nozzles and one 4½ inch steamer.

B. The barrel shall be a minimum of 4½ inches in diameter.

C. The operating nut shall open counterclockwise.

D. Hydrants shall be traffic type (break away).

E. Each hydrant shall have its own auxiliary valve. This valve shall be as close to the water main as practical.

F. Leads going from the main to the hydrant shall not be less than six (6) inch.

G. Hydrants shall be painted to these specifications:

1. Hydrants and all exposed parts shall be painted with the required primer and finish coats in accordance with current AWWA standards. Finish coats shall be Benjamin Moore #071-15 Safety Yellow Industrial Enamel or equivalent. The developer shall supply the hydrant with the above mentioned coating.

2. The outlet caps shall be painted according to flow rates represented:

Black	-	Dead End Mains
Red	-	500 gpm or less
Orange	-	500 - 1,000 gpm
Green	-	1,000 - 1,500 gpm

3. All hydrants that receive pressure from a Fire Department connection or an on-site suppression system shall be classified as private hydrants and shall be painted red.

City Corporation and the Russellville Fire Department shall be responsible for flow color coding.

- B. When hydrants are put into service, the chains shall be removed. All new and existing hydrant caps shall be kept wrench tight to avoid theft. If need replacing, gaskets will not be removed, but reported to City Corporation.

HYDRANT INSTALLATION

1. Hydrants shall be installed in accordance with City Corporation specification drawings.
2. Hydrants shall be installed so that the steamer connection will face the street.
3. Where practical, hydrants shall be installed within ten (10) feet of the street intersection.
4. Replacement hydrants in developed areas shall be located at least three (3) feet from driveways, street lights, utility poles or any other objects that may obstruct the use of the hydrant. In new developments, driveways, street lights, utility poles or any other objects that may obstruct the use of the hydrant shall be located at least three (3) feet from any hydrant installation.
5. Each hydrant shall have a french drain at the shoe in order for the hydrant to drain correctly.
6. All new hydrants shall be installed with a 5' X 5' X 4" concrete slab on compacted subgrade surrounding the hydrant base and isolation valve. One edge of slab shall be contiguous with the curb back. If a sidewalk is planned, a minimum of 4' clear walk area will be provided around the hydrant. The Russellville Fire Department shall enforce and the developer shall be responsible for conforming with this requirement.
7. Proper installation and acceptance by the Fire Department and City Corporation of mains and hydrants are required prior to building permits being issued.
8. New hydrants being installed shall be inspected by City Corporation and/or the Fire Department. The developer is responsible for contacting either agency prior to backfilling. Necessary corrections shall be the responsibility and at the expense of the developer.

REVIEW OF PLANS

The Russellville Fire Department and City Corporation shall review all proposed water line extensions for residential, commercial and industrial developments and additional hydrants on existing mains. The Fire Department shall determine the need for on-site fire protection systems. Approved fire protection layouts cannot be altered, abandoned, or added to without prior approval of the Russellville Fire Department and City Corporation. Any request for such alterations must be made in writing, complete with drawings, noting the alterations being requested. Plans shall be provided to City Corporation and the Russellville Fire Department.

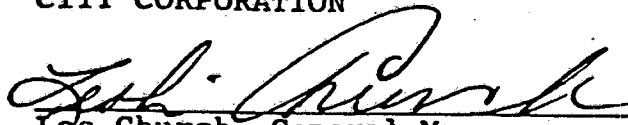
A sufficient number of copies of proposed extensions shall be submitted to the Fire Department for review, prior to submission to City Corporation and the Russellville Planning Commission for approval. This is to provide all agencies and governing bodies with an approved, stamped copy with Fire Department approval.

Plans for new or updated hydrant installations shall include:

1. Exact location and size of existing and proposed water mains and hydrants.
2. Flow calculations for each hydrant.
3. Details of hydrant installation and concrete pad.
4. Details of concrete pad and hydrant location in regard to proximity to curbs, corners, sidewalks, catch basins, etc.


This cooperative policy and its enforcement, is required for the health, safety and welfare of the citizens and for the protection of property within and adjacent to the City of Russellville.

CITY CORPORATION


Les Church, General Manager

2/6/93
Date

RUSSELLVILLE FIRE DEPARTMENT


Ray Hobby, Fire Chief

2/9/93
Date

WATER DISTRIBUTION MAIN
EXTENSION AGREEMENT

This agreement, made and entered into this _____ day of _____, 19____, by and between City Corporation, operators of the Russellville, Arkansas Water and Sewer system, hereinafter called "Utility", and _____, hereinafter called "Applicant", witnesseth:

1. The applicant agrees to construct water distribution mains and appurtenances, as described herein and depicted on attached engineering plans, and the Utility agrees to accept these water distribution mains and appurtenances as a part of the Russellville Water and Sewer System.
2. The applicant states that his total cost to construct these water distribution mains and appurtenances is \$ _____ DOLLARS (\$ _____) as documented by the attached itemized cost statement. Total cost is inclusive of construction, engineering and surveying, and right-of-way costs.
3. It is further mutually understood and agreed that the water distribution mains and appurtenances constructed under this agreement within the limits of the streets, avenues, roadways, or easement areas, whether or not attached to or serving customers, but constructed as a part of this extension, shall be and remain the property of the Utility, its successors and assigns. The Utility shall have the right to extend, relocate, modify or adjust any or all parts of this water main extension, acting in the best interests of the Water and Sewer System, so long as water service and fire protection is continued to the properties of Applicant for which this water main extension was intended to serve. Applicant shall not be entitled to any refund of cost or rebate as a result of extensions, adjustments, relocations or modifications to this water main extension.
4. Applicant warrants that the materials and workmanship utilized in constructing this extension are in conformance with Utility's standard specifications, and Applicant further warrants that if the materials or workmanship utilized in constructing this extension are found by Utility to be defective within a period of one (1) year from the date of this agreement, Applicant will promptly and without cost to Utility repair, remedy or otherwise make good the defect to the satisfaction of Utility.
5. As a part of execution of this agreement, Applicant grants to Utility an exclusive and irrevocable easement, at no cost to the Utility, for the installation, maintenance, operation, repair and replacement of said water distribution main extension and appurtenances. Said easement is in a form acceptable to Utility, and is recorded in the Circuit Clerk's office of Pope County, Arkansas.
6. If the water distribution main constructed by Applicant fronts property of potential water customers other than the property intended for service by Applicant, Applicant is entitled to

recover a portion of his costs incurred in constructing the water main extension. The recovery of the said portion of these costs shall be through the issuance of Connection Certificates by the Utility to the Applicant. The Connection Certificates issued by Utility as a part of this agreement shall constitute the total cost recovery remedies available to Applicant, unless this agreement is accompanied by an Addendum describing additional cost recovery remedies to which Applicant is entitled.

Connection Certificates will be issued in number equal to the number of potential lots or building sites along and with frontage on the extension, in agreement with the Applicant. The value of the Certificates shall be determined by dividing the total cost of the extension, as stated in Paragraph 2 of this agreement, by the number of potential lots or building sites fronting on the Water Distribution Main Extension. The number of total lots and building sites shall include the lots and building sites intended to be served by Applicant. Applicant will, on execution of this agreement, surrender Certificates equal in number to the lots and building sites intended to be served by this extension.

Each outstanding Certificate shall earn interest at the rate of _____ percent (____ %) per year, for a period of five years from the date of issue. Utility will permit service connections to this Water Distribution Main extension only on presentation of an appropriate Connection Certificate, or payment of the face value of the Certificate plus interest earned. If the utility accepts payment of the value of the Certificate in lieu of an actual certificate, Applicant agrees to surrender the certificate to the Utility in return for payment of the amount collected. Certificates shall become null and void after ten (10) years, and Utility shall have the right to connect potential customers without certificates or payment of the value of the Certificate, after ten years from the date of issue of the Certificates

7. Applicant agrees to indemnify Utility and to hold Utility harmless against any loss or damage including costs and attorney fees incurred or sustained by Utility in the administration and enforcement of this agreement.
8. This agreement is valid and binding on the Utility only when approved and executed by its General Manager.

Executed in duplicate by the parties hereto on the day and year first above mentioned.

CITY CORPORATION

By: _____
Its: General Manager

APPLICANT

OFFSITE SERVICE ADDENDUM TO
WATER DISTRIBUTION MAIN
EXTENSION AGREEMENT

This Addendum is a part of and is attached to the Water Distribution Main Extension Agreement entered into between City Corporation, operators of the Russellville, Arkansas Water and Sewer System, hereinafter called "Utility", and _____, hereinafter called "Applicant", dated this _____ day of _____, 19__.

1. The intent of this addendum is to acknowledge that Applicant, in constructing the Water Distribution Main, has invested in water distribution facilities of greater capacity than normally required for domestic water service and fire protection to Applicant's properties, and this greater capacity facilities will make water service potentially available to properties which do not front on the Water Distribution Main.
2. Due to this investment in facilities with excess capacity, Applicant is entitled to recover some of his costs in constructing said Water Distribution Main from future applicants who will construct water distribution main extensions which utilize some or all of the Water Distribution Main constructed by Applicant.
3. The recovery of that portion of the cost of the Water Distribution Main and Appurtenances which makes possible water service to properties which do not front on the Water Distribution Main shall be through the issuance of Offsite Connection Certificates. Offsite Connection Certificates shall be issued in number equal to the number of lots or building sites which do not front on the Water Distribution Main Extension, but, in the opinion of the Utility, can be provided with water service by the future construction of a water distribution main extension by applicants other than Applicant. The value of each Offsite Connection Certificate shall be the fraction of the total cost of the Water Distribution Main Extension constructed by Applicant which is not attributable to providing service to Applicant's properties or lots and building sites which front on the Water Distribution Main Extension constructed by applicant, divided by the number of offsite lots or building sites, or acreage of unplatted property.
4. The Applicant states, and the Utility agrees, that the fraction of the total cost of constructing the Water Distribution Main attributable to excess capacity, which may be in the future be utilized by future applicants who construct future water distribution main extensions to provide water service to their properties offsite from the Water Distribution Main constructed by Applicant is

_____ DOLLARS (\$ _____), inclusive of construction, engineering and surveying, and right-of-way costs.

5. The location of the properties offsite from the Water Distribution Main Extension which can be provided water service in the future by construction of water distribution main extensions connecting to the Water Distribution Main Extension constructed by Applicant is shown on the engineering plans attached to and a part of the Water Distribution Main Extension Agreement.
6. The administration of the Offsite Connection Certificates shall be identical to the administration of the Connection Certificates described in Paragraph 5 of the Water Distribution Main Extension Agreement, of which this addendum is a part.
7. Applicant agrees to indemnify Utility and to hold Utility harmless against any loss or damage including costs and attorney fees incurred or sustained by Utility in the administration and enforcement of this agreement.
8. This agreement is valid and binding on the Utility only when approved and executed by its General Manager.

Executed in duplicate by the parties hereto on the day and year first above mentioned.

CITY CORPORATION

By: _____
Its: General Manager

APPLICANT

SEWAGE COLLECTION MAIN
EXTENSION AGREEMENT

This agreement, made and entered into this _____ day of _____, 19____, by and between City Corporation, operators of the Russellville, Arkansas Water and Sewer system, hereinafter called "Utility", and _____, hereinafter called "Applicant", witnesseth:

1. The applicant agrees to construct sewage collection mains and appurtenances, as described herein and depicted on attached engineering plans, and the Utility agrees to accept these sewage collection mains and appurtenances as a part of the Russellville Water and Sewer System.
2. The applicant states that his total cost to construct these sewage collection mains and appurtenances is \$ _____ DOLLARS (\$ _____) as documented by the attached itemized cost statement. Total cost is inclusive of construction, engineering and surveying, and right-of-way costs.
3. It is further mutually understood and agreed that the sewage collection mains and appurtenances constructed under this agreement within the limits of the streets, avenues, roadways, or easement areas, whether or not attached to or serving customers, but constructed as a part of this extension, shall be and remain the property of the Utility, its successors and assigns. The Utility shall have the right to extend, relocate, modify or adjust any or all parts of this sewage collection extension, acting in the best interests of the Water and Sewer System, so long as sewer service is continued to the properties of Applicant for which this sewage collection main extension was intended to serve. Applicant shall not be entitled to any refund of cost or rebate as a result of extensions, adjustments, relocations or modifications to this sewage collection main extension.
4. Applicant warrants that the materials and workmanship utilized in constructing this extension are in conformance with Utility's standard specifications, and Applicant further warrants that if the materials and workmanship utilized in constructing this extension are found by Utility to be defective within a period of one (1) year of the date of this agreement, Applicant will promptly, and without cost to Utility repair, remedy, or otherwise make good the defect to the satisfaction of Utility.
5. As a part of execution of this agreement, Applicant grants to Utility an exclusive and irrevocable easement, at no cost to the Utility, for the installation, maintenance, operation, repair and replacement of said sewage collection main extension and appurtenances. Said easement is in a form acceptable to Utility, and is recorded in the Circuit Clerk's office of Pope County, Arkansas.
6. If the sewage collection main constructed by Applicant fronts property of potential sewage customers other than the property intended for service by Applicant, Applicant is entitled to recover a portion of his costs incurred in

constructing the sewage collection main extension. The recovery of the said portion of these costs shall be through the issuance of Connection Certificates by the Utility to the Applicant. The Connection Certificates issued by Utility as a part of this agreement shall constitute the total cost recovery remedies available to Applicant, unless this agreement is accompanied by an Addendum describing additional cost recovery remedies to which Applicant is entitled.

Connection Certificates will be issued in number equal to the number of potential lots or building sites along and with frontage on the extension, in agreement with the Applicant. The value of the Certificates shall be determined by dividing the total cost of the extension, as stated in Paragraph 2 of this agreement, by the number of potential lots or building sites fronting on the Water Distribution Main Extension. The number of total lots or building sites shall include the lots or building sites intended to be served by Applicant. Applicant will, on execution of this agreement, surrender Certificates equal in number to the lots or building sites intended to be served by this extension.

Each outstanding Certificate shall earn interest at the rate of _____ percent (___%) per year, for a period of five years from the date of issue. Utility will permit service connections to this sewage collection main extension only on presentation of an appropriate Connection Certificate, or payment of the face value of the Certificate plus interest earned. If the utility accepts payment of the value of the Certificate in lieu of an actual certificate, Applicant agrees to surrender the certificate to the Utility in return for payment of the amount collected. Certificates shall become null and void after ten (10) years, and Utility shall have the right to connect potential customers without certificates or payment of the value of the Certificate, after ten years from the date of issue of the Certificates

7. Applicant agrees to indemnify Utility and to hold Utility harmless against any loss or damage including costs and attorney fees incurred or sustained by Utility in the administration and enforcement of this agreement.
8. This agreement is valid and binding on the Utility only when approved and executed by its General Manager.

Executed in duplicate by the parties hereto on the day and year first above mentioned.

CITY CORPORATION

By: _____
Its: General Manager

APPLICANT

OFFSITE SERVICE ADDENDUM TO
SEWAGE COLLECTION MAIN
EXTENSION AGREEMENT

This Addendum is a part of and is attached to the Sewage Collection Main Extension Agreement entered into between City Corporation, operators of the Russellville, Arkansas Sewer and Sewer System, hereinafter called "Utility", and _____, hereinafter called "Applicant", dated this _____ day of _____, 19____.

1. The intent of this addendum is to acknowledge that Applicant, in the opinion of the Utility, in constructing the Sewage Collection Main Extension and Appurtenances, has invested in sewage collection facilities of larger pipe diameter than the minimum diameter pipe normally required for sewage collection service or has constructed sewage pumping and/or offsite sewer collection facilities of a capacity greater than needed for Applicant's properties, and these greater capacity facilities will make sewer service potentially available to properties which do not front on the Sewage Collection Main.
2. Due to this investment in facilities with excess capacity, Applicant is entitled to recover some of his costs in constructing said Sewage Collection Main and Appurtenances from future applicants who will construct sewage collection main extensions which utilize some or all of the Sewage Collection Main and Appurtenances constructed by Applicant.
3. The recovery of that portion of the cost of the Sewage Collection Main and Appurtenances which makes possible sewer service to properties which do not front on the Sewage Collection Main shall be through the issuance of Offsite Connection Certificates. Offsite Connection Certificates shall be issued in number equal to the number of lots or building sites which do not front on the Sewage Collection Main Extension, but, in the opinion of the Utility, can be provided with sewer service by the future construction of a sewage collection main extension by applicants other than Applicant. The value of each Offsite Connection Certificate shall be the fraction of the total cost of the Sewage Collection Main Extension constructed by Applicant which is not attributable to providing service to Applicant's properties or lots and building sites which front on the Sewage Collection Main Extension constructed by applicant, divided by the number of offsite lots or building sites, or acreage of unplatted property.
4. The Applicant states, and the Utility agrees, that the fraction of the total cost of constructing the Sewage Collection Main which is attributable to excess capacity, which may be in the future be utilized by future applicants who construct future sewage collection main extensions to provide sewer service to their properties offsite from the

Sewage Collection Main constructed by Applicant is
DOLLARS (\$ _____),
inclusive of construction, engineering and surveying, and
right-of-way costs.

5. The location of the properties offsite from the Sewage Collection Main Extension which can be provided sewer service in the future by construction of sewer collection main extensions connecting to the Sewage Collection Main Extension constructed by Applicant is shown on the engineering plans attached to and a part of the Sewage Collection Main Extension Agreement.
6. The administration of the Offsite Connection Certificates shall be identical to the administration of the Connection Certificates described in Paragraph 5 of the Sewage Collection Main Extension Agreement, of which this addendum is a part.
7. Applicant agrees to indemnify Utility and to hold Utility harmless against any loss or damage including costs and attorney fees incurred or sustained by Utility in the administration and enforcement of this agreement.
8. This agreement is valid and binding on the Utility only when approved and executed by its General Manager.

Executed in duplicate by the parties hereto on the day and year first above mentioned.

CITY CORPORATION

By: _____
Its: General Manager

APPLICANT

RIGHT OF WAY PERMIT
WATER

KNOW ALL MEN BY THESE PRESENTS: That _____, hereinafter called Grantor, for and in consideration of the sum of One and No/100 Dollars (\$1.00), and other valuable considerations, to us cash in hand paid, the receipt whereof is hereby acknowledged, do hereby grant and convey unto the City of Russellville, hereinafter called Grantee, and unto its successors and assigns, the right, privilege and easement to build and maintain over, upon and across the land hereinafter described, a pipe line with the necessary fittings for the transmission and distribution of water. The rights hereby conferred provide for the privilege and authority to enter on said lands for the purpose of construction and building said pipe line, maintenance and operation thereof, with the right to clear and keep clear a right of way, of needed width, and for the repairing, reconstructing, operating and removing of same at any and all times.

The said right of way hereby conferred shall be at or near the pipe line as staked or indicated, over, under, upon and across the following lands located and situated in Pope County, Arkansas, to-wit:

and the right of free ingress and egress over adjacent lands to or from said right of way is hereby conferred upon said Grantee, its successors and assigns, at any time for the purpose recited herein.

Grantor agrees that no building will be erected on the easement granted by this instrument, and Grantor agrees not to perform or permit any action which will interfere with the rights granted by this instrument.

The right to farm and cultivate and otherwise use said right of way by the Grantor, except for the purpose herein granted to the Grantee, is especially reserved, and if the Grantee should ever permanently abandon the use of said right of way for the purposes herein contracted, it shall revert to the Grantor, their heirs or assigns.

It is also agreed and understood by both parties that the said ground will be returned to its natural look after line is installed. Any future repairs requiring earth moving will result in a return to present state after repairs are made. This would include repairs to blacktop or concrete, whichever may be the case.

IN WITNESS HEREOF we hereto set our hands and affix our seal this _____ day of _____ 19____.

ACKNOWLEDGMENT

State of _____
County of _____

BE IT REMEMBERED that on this day came before me the undersigned, a Notary Public, within and for the county and state aforesaid, duly commissioned, and acting, _____, to me well known as the Grantor in the foregoing permit and acknowledged that they had executed the same for the consideration, uses and purposes therein mentioned and set forth.

WITNESS my hand and seal as such Notary Public this _____ day of _____, 19____.

Notary Public

My Commission Expires: _____

RIGHT OF WAY PERMIT
WASTEWATER

KNOW ALL MEN BY THESE PRESENTS: That _____, hereinafter called Grantor, for and in consideration of the sum of One and No/100 Dollars (\$1.00), and other valuable considerations, to us cash in hand paid, the receipt whereof is hereby acknowledged, do hereby grant and convey unto the City of Russellville, hereinafter called Grantee, and into its successors and assigns, the right, privilege and easement to build and maintain over, upon and across the land hereinafter described, a pipe line with the necessary fittings for the collection of wastewater. The rights hereby conferred provide for the privilege and authority to enter upon said lands for the purpose of construction and building said pipe line, maintenance and operation thereof, with the right to clear and keep clear a right of way, of needed width, and for the repairing, reconstructing, operating and the removing of same at any and all times.

The said right of way hereby conferred shall be at or near the pipe line as staked or indicated, over, under, upon and across the following lands located and situated in Pope County, Arkansas, to-wit:

and the right to free ingress and egress over adjacent lands to or from said right of way is hereby conferred upon said Grantee, its successors and assigns, at any time for the purpose recited herein.

Grantor agrees that no building will be erected on the easement granted by this instrument, and Grantor agrees not to perform or permit any action which will interfere with the rights granted by this instrument.

The right to farm and cultivate and otherwise use said right of way by the Grantor, except for the purpose herein granted to the Grantee, is especially reserved, and if the Grantee should ever permanently abandon the use of said right of way for the purposes herein contracted, it shall revert to the Grantor, their heirs or assigns.

It is also agreed and understood by both parties that the said ground will be returned to its natural look after line is installed. Any future repairs requiring earth moving will result in a return to present state after repairs are made. This would include repairs to blacktop or concrete whichever may be the case.

IN WITNESS HEREOF we hereto set our hands and affix our seals this _____ day of _____ 19, ____.

ACKNOWLEDGMENT

State of _____
County of _____

BE IT REMEMBERED that on this day came before me the undersigned, a Notary Public, within and for the county and state aforesaid, duly commissioned, and acting, _____, to me well known as the Grantor in the foregoing permit and acknowledged that they had executed the same for the consideration, uses and purposes therein mentioned and set forth.

WITNESS my hand and seal as such Notary Public this _____ day of _____, 19 ____.

Notary Public

My Commission Expires: _____

STANDARD SPECIFICATIONS AND DETAILS

Introduction:

These material and construction specifications, and standard details of construction, are intended to describe the minimum quality of materials and construction acceptable for the extension of the water distribution system or the sewage collection system operated by City Corporation, the Russellville, Arkansas, Water and Sewer System.

The approval of proposed plans for water distribution main extensions, or sewage collection main extensions, shall be with the explicit understanding that the extensions are designed and constructed in accordance with these Standard Specifications and Details, unless City Corporation has given specific written approval for a departure from these standards for the particular extension to be constructed.

Summary:

The following summary is intended as a brief condensation of the City Corporation STANDARD SPECIFICATIONS AND DETAILS, for the convenience of those individuals planning to construct extensions to the water distribution main system or the sewage collection main system of Russellville, AR. It is not intended to substitute or replace the full text of the STANDARD SPECIFICATIONS AND DETAILS, which follows this summary.

Water Main Extensions - Materials

2" and 3" Pipe	PVC, Class 200 psi, SDR 21, Gasketed Joints
6" - 12" Pipe	PVC, Class 150 psi, AWWA C900, Gasketed Joints, Ductile Iron, Class 50, Push-on Joints
14" and Larger Pipe	Ductile Iron, Class 50, Push-on Joints
3/4" & 1" Water Service Line	Type "K" Copper
2" Valves	Screw Thread Brass Body "Tee" Head, Open CCW
6" - 10" Valves	Resilient Seat MJ End Gate Valves with 2" Square Operating nut, Open CCW
12" and Larger Valves	Butterfly Valves with MJ Ends, 2" Square Operating Nut, Open CCW

Fire Hydrants

4-1/2" Barrel "3-way" AWWA Standard Hydrants with 6" MJ Shoe, Painted Yellow, Open CCW, set with 6" "Anchor" Tee

Water Main Extensions - Procedures

30 " minimum cover over all water distribution mains.

All valves must have standard valve boxes.

Fire hydrants on curb and gutter streets require concrete pad around hydrant barrel and isolation valve box.

PVC pipe must be installed with copper tracer wire.

All water main installations shall be pressure tested, 150 psi minimum.

Contractors are not permitted to make connections to existing water lines, only City Corporation personnel may make connections or operate valves.

Completed and sterilized mains shall be flushed and sampled by City Corporation personnel. No service connections permitted or meters set until water samples are certified bacteriologically pure by the Arkansas State Department of Health.

Sewer Main Extensions - Materials

4" Service Line Pipe	SDR 26 PVC with Gasket Joints, or Schedule 40 PVC with Solvent Welded Joints
6" and Larger Sewer Main	SDR 26 PVC with Gasket Joints Class 50 Ductile Iron where specified
Manholes	Monolithically Poured Concrete Precast Reinforced Concrete
Manhole Covers	Cast Iron Traffic type, 260 lb Minimum Weight for Frame and Cover

Sewer Main Extensions - Procedures

All PVC pipe laid in full bed of gravel.

Sewer mains with less than 2'-0" of cover shall be ductile iron.

All sewer main pipe shall be laid with construction laser, on constant grade and straight alignment.

All sewer mains shall be air tested prior to acceptance.

SEWER STOPPAGES PROCEDURE

A procedure for making problem tickets to check sewer mains or customer sewer lines when the customer calls in for stoppages or other sewer related problems.

1. Obtain the name, address, and phone # for the customer with the sewer stoppage. Verify account and update as necessary. Look at notes on the account and ticket history to determine if stoppage is a reoccurring problem. This will aid you in determining if this customer needs to call a plumber or you need to place an order to check our mains for stoppages. If a reoccurring problem exists here, contact the NOC manager and discuss situation. NOC manager will advised you on how to proceed with ticket.
2. Ask the customer if stoppage is occurring in house and/or overflowing in house. If so ask the customer if they know where their clean out is. If the customer is able to take the cap off the clean out then stoppage will not overflow into house and it will make their cleanup easier.
3. Ask the customer if they have already contacted a plumber or been advised by a plumber to contact City Corp to check our sewer mains. It is common for Roto Rooter to advise customer to ask City Corp to camera their customer lines (in which we cannot do) when they cannot locate problem or clear stoppage. The customer responsibility is from the house to the main (for stoppages caused by a build up of grease, roots, trash, paper towels, etc).
4. Make a problem ticket to check City Corp mains for stoppage by selecting option 10 (S/O) next to the address and pressing F6 to create order. Select 6 (problem ticket) and press enter. Work center and work crew will be 450/450 for stoppages. Requested by must be enter by whom is calling in the stoppage and verify phone number to contact customer about results and press enter. Type stoppage on the find line on the next screen and select transaction # 52316 (sewer stoppage – main line) and press enter. Add notes as to what was discussed with customer and a phone number to contact or if customer will be home etc then press enter and schedule for the current days date and press enter. Print the order by selecting 6 (print) next to the order and choosing printer PRT04.

SEWER RATE ADJUSTMENT PROCEDURE

During the months of January, February, and March of every year, City Corporation readjusts the sewer rates for residential customers according to the average water usage during those 3 months. The new sewer rate goes into effect on the April invoice for the residential customers. The rate structure for sewer charges is set by Russellville city ordinance (see attached). If a residential customer had/has a water leak that did not flow into their sewer lines during the first 3 months of the year, their sewer rate will be set at that average effected by the leak. City Corporation can readjust the sewer rates if the residential customer effected will provide us with proof of leak and repair.

1. Ask customer to provide us a copy of plumbers receipt or if they fixed leak their selves, a receipt for parts to fix leak. We **CAN NOT** readjust sewer without a copy of the plumbers receipt or parts receipt. If the current month is before March, file the copy of the plumbers receipt in the current year's sewer adjustment folder with the customers name, address, and account number written on the receipt (this will be need by the Administrative Office to adjust sewer) and add notes (option 7) to the customer master (name) as to what was done.
2. If the current month is after March, the Business Office will take care of the readjustment. Verify on the customers account that usage was abnormal during Jan., Feb., and Mar. Look up the customers account (option 1 customer master information from the front office menu) ((type name on the find line and take option 9 (meters) on the profile (account address) take option 5 (display readings) and verify usage)). Look up the previous and current sewer rate. Current sewer rate can be found by looking at the transactions (option 15) on the profile (address). Previous sewer rate can be found by looking at invoice ((option 14 on profile then option 8 (detail) on the invoice) before April of the same year.
3. Readjust current sewer rate to previous year sewer rate. Choose transaction (option 15) on profile (address) tab down to sewer transaction and change (option 2) sewer to previous year amount. Add notes (option 7) on customer master (name) about changing sewer rate from current sewer amount to last year sewer amount. File plumber's receipt in the sewer adjustment folder for the correct year. If customer does not have previous year history to readjust sewer, see Business Office Supervisor for adjustment procedure.

COMMERCIAL SEWER RATE ADJUSTMENT PROCEDURE

Commercial sewer rates are not prorated for the average usage. The sewer rates are a direct result of the water usage used during the billing period. If a commercial customer has a leak during a billing period that did not flow into the sewer, an adjustment can be made on the sewer charges if the commercial customer will provide us with proof of leak and repair. A sewer adjustment can also be issued if a commercial customer fills a swimming pool. Proof of the dimensions of the swimming pool will need to be provided by the commercial customer to accurately measure the amount of water the pool contains.

1. Ask customer to provide us a copy of plumbers receipt or if they fixed leak their selves, a receipt for parts to fix leak. We **CAN NOT** readjust sewer without a copy of the plumbers receipt or parts receipt. We **CAN NOT** issue credit for leaks that flowed into the sewer. After obtaining the receipt you may issue the credit and file a copy of the receipt in the sewer adjustment folder for the correct year. Place notes on the customer master as to what occurred.
2. Figure a 12 month average water usage for the commercial customer by reviewing the meter usage. This will be used to give credit toward the sewer rate. You will also need to know the current sewer charged on the invoice you are giving credit toward. Subtract the average usage from the sewer charged (This will be the amount of credit you will issue).
3. Create a problem ticket for the address you want to issue the credit. On the credit invoice field you will need to press F4 for the drop down menu and select the invoice you are giving credit toward. The transaction you will choose is 52339 (ADJ SEWER RATE-OUTSIDE WTR USE) then take an option 2 to change the charge override amount to the credit you want to issue. You will need to place the dollar amount in the field without decimals and then a minus sign (field -) to issue credit on that invoice. Finish the ticket out by pressing enter and adding notes as to why you are giving the credit toward the sewer rate. Schedule the ticket for yourself and release the order to issue the credit.

DOVER MONTHLY SEWER REPORT PROCEDURE

1. Locate the "Dover Sewer Accts" folder. You can access this by choosing "My Computer" from your start menu or desktop, then under network drives choose "public on 'Ccmws1' (P:)", next choose the "PC300" folder, finally choose the "Dover Sewer Accts" folder.
2. Choose the current year's excel file and locate the current month's tab and print the sheet by choosing file and print at the top of the page.
3. You will then look up the water usages and meter readings in the AS/400. Choose customer master information (option 1) then flop to work with service location information (F11). Enter the address on the find line and select readings (option 16) next to address. Write the reading and usage on the sheet for later use. Also, note the date the meter was read at the top of the sheet for later use. Complete for all addresses.
4. If any corrections need to be made with the customer name changing, meter being replaced, or account number changing, etc., note this on the sheet for later use.
5. Go back into the excel file and enter meter reading date in cell "A2" using the 2 digit month, 2 digit day, and 4 digit year format with slashes (/) in between. Example: 01/01/2010. The field "Date Read" will now be occupied by the date you entered in cell "A2".
6. Now enter the meter readings in row "G" next to the correct meter number and update all incorrect information for that address if applicable. The "Cons." field in row "I" should now recalculate the correct usage automatically. Check with your records written on the sheet to make sure these updated correctly.
7. After all the information has been updated and meter readings have been entered in you can print and save the excel file to the current year's spreadsheet. Print by selecting "file" and "print" at the top of the page and save by selecting "file" and "save as" and making sure the file name is correct, then select the "save" button from the window that popped up.
8. Take the updated and printed "Dover Monthly Sewer Report" to the fax machine and fax this to Dover Water fax # 331-3388.

NEW CUSTOMER MASTER SETUP

1. From front office menu choose option 1 (customer master information). Type customer name on find line and press enter. Check for name matches if no matches, then press F6 to add new customer. If name match verify social and if it matches update that customer master instead of making a new customer master.
2. After pressing F6 tab down to Soc. Sec. or Tax Id Number field and fill in social (residential accounts) or tax I.D. (commercial accounts). The first set is for the primary account holder the second set is for spouse or roommate. Tab down to Scan drivers license and swipe the magnetic strip to check for matches. If magnetic strip does not work or its an out of state I.D. without a magnetic strip you will need to tab back to the top and fill out the rest of the information (customer/business name, drivers license #, D.O.B.) required to set up account. Press enter when finished to scan for matches. (Note: last name goes first followed by first name then middle name or initial and finally the Sr., Jr., II, III, etc.)
3. The next screen will show you any matches to the information you have entered. Check all the matches with option 5 for 700 (bad debt) F/C (financial class) code and make sure the new customer you are setting up does not owe us any bad debt. If you found a match then select the match with option 1 and update that account instead of creating a new account and collect any debt owing. If no matches were found press enter for information review, then press enter again to proceed with account set up.
4. Financial class is set to default for new customers unless there is reason to change this. You can select a drop down menu by pressing F4 wherever you see a plus (+) sign next to an entry field.
5. Account type will usually be residential (1) or commercial (2). Again a drop down menu is provided, press F4 for menu to select correct account type. (Note: you will need to ask the customer questions if you are unsure of the account type. i.e. will you be living here, will you be running a business from this address, etc.) If this is a commercial account you will also need for the customer to fill out a nonresidential application before a connect order can be competed.
6. The customer name and sort sequence should already be filled out from the information you have already entered. Make sure the sort sequence matches the customer name.
7. Owner name must be filled in if this is a commercial account. If this is an Inc. or there are several owners, list at least one of the owners names in this field.
8. There are 3 address lines. For normal address you will type the address starting on line 3. Line 2 is for C/O (in care of). Line 1 is for additional info usually only used for commercial accounts. Fill out the City, State, and Zip. For Russellville addresses only you may type the zip code (72801) on the first line and after pressing enter this will update with the correct zip+4. If you are having trouble finding a zip code, tab over to the zip code line and press F4 for the drop down menu and enter the city on the find line. This will help you determine the correct zip code.
9. The social, D.O.B, and drivers license field should have already been entered. Verify to make sure they are correct. You will also need to add a phone number in the phone number field. This can be a home phone or cell phone. (Note: add the area code first to all phone numbers, local and out of town.) If there is and extension number you

- may also enter this in after the phone number field. If the customer has a fax number you can enter this in also. Press enter to move to the next data entry screen.
10. Own/Rent field is next. Again a drop down menu is provided. (O) for own (R) for rent. If this is a rent property type in the landlord name in the field provided.
 11. Next are how many persons in total live in the household. This is used to set the sewer rate outside of the proration period (Jan., Feb., Mar.)
 12. Terms code should always be N20 (Net 20) unless the customer is disabled and they only receive a check once a month. This is used to extend the due date 10 more days so they get paid before their bill is due. This will not be changed on a new customer set up because the due dates of the bills vary.
 13. Sales tax exempt ID is for sales tax exempt businesses and can only be entered after they supply us with a copy of their sales tax exempt ID form. Number of copies is for multiple invoices, special invoice print code is for sorting, job/PO/password required is for exceptions when more security is required on a customer account. You can select (Y) or (N) and add notes to the account if the customer requires a password to access their account.
 14. Next is employer information (i.e. unemployed, SSI, disability, retired, self employed) or any other company name and phone number. Enter the area code in first and if they have an extension enter this after the phone number. Press enter to move on to the next data entry screen.
 15. Spouse/Roommate info is next, if you entered a social during the initial set up on the secondary social line then this will already be entered in now. You will need to fill out the marital status and relationship to the primary, again there is a drop down menu here for selection. Fill out the name in the name filed, last name first unless they have a large last name that is the same as the primary last name, then you may only put the first name here. Enter the social if not already here and the D.O.B. their employer information and the phone number or a cell phone number for the secondary with area code first then extension number if applicable last.
 16. Finally nearest relative information is required. Ask the customer for a nearest friend or preferably relative that does not live in the household. Must at least have a name and phone number. Fill out as much info as you can. If they don't know the street address maybe they know the city and state their relative lives in. The last field is for the relationship to the primary account holder, again a drop down menu is provided. The relative information is mainly used for debt collection purposes but you need to explain to the customer that this is for an emergency contact in case we cannot reach them by any other means. This is required to set up an account. Press enter when complete and this will bring you to the next data entry screen.
 17. This next screen is for direct deposit information. If the customer chooses to set up their account on direct deposit there is a form to fill out and a voided check is needed to set this up. They can also set this up online and no voided check is needed. If the customer chooses to set up bank draft, place completed form with voided check attached in the administrative depts. box for bank drafts. The administrative dept. will set this up in the AS/400. Pressing enter from the bank draft screen will bring you back to the customer master account where you can now create the connect order.

CONNECT ORDER

1. Choose option 32 (service location) to check address before connecting. Type address on find line and choose option 10 (work with S/O) to check for service orders for no-billers or disconnects etc. You are looking for potential problems associated with address. Choose option 7 (notes pad) next to address to check for any notes associated with the address. Choose option 8 (transactions) next to address so you will know what transactions you will be connecting the customer to. Verify that the revenue & tax codes are correct (i.e. commercial, residential, inside city, outside city). Make sure the address is not on hold for any reasons, this would make it impossible for a connect order to be issued until the address is taken off hold by the customer service supervisor or the administrative department. If there are no holds or problems with the address proceed with making connect order.
2. Note: if you are connecting to an existing customer master, make sure you have updated the entire account and verified that the person you are speaking with has access to the account. You will need to verify with a state issued picture I.D. and social security number. You will also need to obtain a lease/rental agreement if the address is owned you will need to obtain acceptance or title papers showing the customer is purchasing the address in question. If you are setting up a new customer master, see the SOP on how to set up a new customer in the AS/400. Due to "The Red Flag Rule" you will need to stay diligent on asking for verification and making sure accounts are up to date. If you have any questions or problems updating or feel as if someone is not being honest with the information they are providing, you will need to notify your supervisor before moving forward in creating or updating the account.
3. From front office menu choose option 1 (customer master information). Type customer name on find line and press enter. Choose option 10 (S/O) next to name and press enter. Press F6 and choose selection 3 (connect) then press F4 on service location line to bring up the service location window and enter address to connect and press enter, finally choose option 1 next to address and press enter. Verify address and order option and press enter again to create connect order.
4. This next screen is a verification screen. Make sure the number of people in household, bank draft code, terms code, tax district/revenue code, and e-mail billing code are correct. Make modifications here if needed and press enter.
5. Next verify info at top of screen is correct and verify phone #, then schedule ticket for work center 300 (business office) and work crew 521 (service truck). The line for job, PO, or password is for added customer security. If a password is required you will have to go back to the customer's notes on their master and verify the password with the customer before typing this password on this line to proceed with order. Type in customer's name that is requesting the connect order. Note: this can only be connected for the primary or secondary on the account or in the case of property management or realty company type in whom you are speaking with. Do not just type in Mr. or Mrs.
6. The bottom of this screen will tell you if this is currently connected in a different customer's name, if so you can schedule the connect order when the customer chooses and a disconnect order will generate on the day the connect order is worked for customer moving out. If there is already a disconnect date you will need to schedule the connect order for the same date and time as the disconnect order. Either way you

will type IN/OUT notes on this order to make the ticket an in & out order (this means someone is moving in and someone is moving out and we will not be turning the water on here because the water should already be on). Press enter to move to the next screen.

7. This screen will tell you the transactions connecting on this address. The deposit can be increased by taking a option 2 (change) next to the transaction with the deposit and typing the new deposit figure in dollar amount without decimal in the deposit amount line and pressing enter. Note: the deposit cannot be decreased, only increased according to the customer credit history. You can also wipe out this amount if this is a financial class that a security deposit is not required on (i.e. property mgmt, VIP, realtor, preferred contractor, etc.) The sewer transaction can also be changed at this screen. This would only apply to new construction or rental property. You may choose option 2 (change) next to the sewer transaction and change this to the current rate for new construction or rental property. The meter connection fee can also be changed at this screen. This would need to be changed for no-billers. Choose option 2 (change) next to the connection fee and change the charge override amount to \$10.00. You can also double the \$7.50 fee for repeat trips if the order has not been released. When you are finished press enter to move to the next screen.
8. Here you can take a payment with cash or check for the deposit amount only. Note: if the amount you want to apply to the account is more than just the regular deposit in cases of non-pay or no-billers you will need to apply the payment through the payment option screen. If this is just a regular connect order with just a deposit amount owing you can enter in the deposit amount and the check # or if paying by cash enter *cash and type your notes about the connect order or press enter for the receipt to print.
9. Next you will schedule the connect order for when the customer wants to meet us for water service. If the customer cannot meet us they can opt to give us a verbal release of liability to turn the water on without them home. (this option can cause house floods if faucets are not in the off position or they have water leaks) In cases of IN/OUT orders the water would already be on and you may just type IN/OUT on the notes. To access the notepad from here press F7 and type in notes for connect order. Choose the date and time frame when the customer can meet you or would like for the order to be worked. Note: IN/OUT orders should be placed with the already scheduled disconnect date if applicable. After entering date on the Pos to Date line choose the correct time frame with the number 1 next to the date/time and press enter.
10. The connect order should now be created. If you need to change this order select option 2 (change) next to the ticket number and repeat steps. If the order is for the same date print this order by choosing option 6 (print) next to the correct ticket #. If for some reason you need to cancel this order choose option 4 (cancel) next to the correct ticket #. Press enter from the service order screen and refresh (F5) and address and account number should show up under the customer name.
11. Choose option 7 (notepad) on the customer name and type notes about the lease agreement. Example (How many persons are living at address, whom the address is leased from, what are the lease terms (to and from dates of lease), any other information from the lease that may be needed to cross reference at a later date)

12. If customer has brought in a letter of credit you will need to place notes on the customer name about the letter of credit and e-mail the administration department to credit the deposit. Notes will need to be applied to the account for previous good credit history with City Corp., when you are waiving a deposit also. E-mail the administrative department to waive deposit. Note on the e-mail if this is an initial deposit or an additional deposit. You can also check the WUDB (water user data base) for a previous utility request if the customer has notified you that they are moving from a water system in the state of Arkansas. Note: before a connect order is placed the customer will have to pay the deposit or provide City Corp. with a letter of credit. City Corporation does not advertise that a deposit can be waived if the customer furnishes us with a letter of credit.

DISCONNECT ORDER

1. From front office menu choose option 1 (customer master information) and tab to the find line and enter the customer name that is requesting a disconnect order. If you are unable to locate the customer name you may need to look up the address and verify the name on the account. Verify the last 4 digits of the social security number on the account and verify the address the customer is requesting to disconnect. The disconnect order may only be requested by persons with access to the account. Choose option 10 (S/O) next to address to enter the service order selection screen.
2. Press F6 to add order. You should select 4 (disconnect) next to selection and the address should already show up in the service location field. Press enter to create disconnect order and verify the forwarding phone number from the customer. Update this phone number here if needed. Select work center (300) and work crew (521) and enter a job, PO, or password if needed. You will have to check notes if a password is active on account and verify password is correct with the customer. Type password into this field and fill in the requested by with the persons name requesting the disconnect order. If you wish to have the meter pulled you can change the (N) to a (Y) in the remove meter from service field. If another customer is connecting to this address this will show at the bottom of the screen in red notifying you to schedule the disconnect order on the same date and time as the connect order to make this an IN/OUT order. Press enter to proceed to next screen.
3. This is the transaction screen that you are disconnecting. There should not be a need to change any of the transactions here. This is just to verify what transactions you are disconnecting. Press enter to proceed to next screen.
4. You will need to ask the customer for a forwarding address. Change the current address on this screen to the forwarding address furnished by the customer. This will update the customer master when the disconnect order is released. If additional notes are needed you may type them in here on the notes lines. Unless this is something out of the ordinary, notes are not required on disconnect orders. Press enter to proceed.
5. Place a date in the pos to date field for when the customer is requesting the disconnect order and choose an open time slot by selecting the number (1) by the correct time. Ask the customer if they prefer this to be shut-off in the AM or PM or if it matters at all. If they request a specific time slot you should also add a note to the order by pressing F7 and typing in "cust. request PM or AM only". Note: orders can only be scheduled out 30 days or less. Press enter and the order is complete. If the order is to be worked in the same day make sure you print the order by selecting option 6 (print) next to the correct order and printing to the output printer (prt04) which is the NOC (network operations center) printer.

GRINDER PUMP PROCESS

1) CUSTOMER APPLIES FOR PERMIT

At this time, a connect order should also be generated. The need for a grinder pump (if not predetermined and reported to the Business Office) should be immediately reported back to the Business Office Manager upon this determination being made. Any changes necessary to the connect order will then be made by the Business Office. This includes adding the necessary transactions to the service address. The customer is contacted by the Business Office to be sure they have been notified of the need for this equipment. The customer should be made aware of the costs related to this (initial cost of the grinder pump and the monthly charge). The time and material ticket that is generated for sewer should have notes added stating the customer should be billed for the cost of the grinder pump on this ticket.

2) The grinder pump is ordered by the Construction Supervisor upon receipt of the permit order. If permit is printed to NOC, be sure that another copy of the permit is printed to the construction printer (CONPRT01).

3) Customer is billed for the cost of the grinder pump as soon as the pump is received. Customer should be notified of this fact at the time they have applied for service. The direct bill form for billing the customer (along with the time and material ticket) should be attached to the invoice when the invoice is submitted to the Administrative Dept. for payment. The construction supervisor will assign a unique serial number to identify the grinder pump. Before assigning this number, they will check with the Administrative Office to determine the number that is to be assigned. The construction supervisor will mark the grinder pump with this number and note the number assigned on the customer service order tickets.

4) The Permit/Connect Order should be closed at the time this pump is picked up. This will begin billing of the sewer and grinder pump transactions on the next customer invoice. The customer should be notified of this at the initial contact. This Permit/Connect Order should be turned into Administrative Department by the Construction Supervisor as soon as the pump is picked up (unless the paperwork has already been turned in with the grinder pump vendor's invoice) for the process to be completed.

RULES AND REGULATIONS GOVERNING THE RENDERING OF SEWER SERVICE

SECTION 1 Definitions

- 1.1 **Utility:** Shall mean City Corporation, acting through its properly authorized officers, agents or employees, each acting within the scope of the particular duties entrusted to him.
- 1.2 **Customer:** Shall be the party contracting for a supply of water through a single meter and service through each meter shall be considered, for billing purposes, as service to a separate customer.
- 1.2.1. **Residential Customer:**
A building under one roof, which is owned, leased or rented by one family and occupied as a residence.

Each family unit of a townhouse or apartment type building, which is individually owned or leased to tenants.

- 1.2.2. **Commercial Customer:**
A building under one roof containing two or more apartments or family units, which are rented or leased to tenants.

Any building occupied by a retail or service business.

Any building containing any combination of the above two items.

Any building or combination of buildings in the same compound whose primary use is for the manufacture, fabrication and or assembly of any product.

A publicly owned building such as a school, city hall, court house, fire house, hospital or other public institution.

A system which is city-owned and operated or a system which is operated or owned by a district or community.

The purpose of the foregoing definitions is to preserve to the maximum extent possible, the obligations of the Utility to furnish service, and to preserve the jurisdiction of City Corporation Board of Directors over service being furnished by the utility, and shall be construed and applied to accomplish that purpose

Section 2 Application for Installation of New Service

- 2.1 Service connection will be made and sewer service will be furnished upon application by the prospective customer (or his properly authorized agent) and after approval of such application by the Utility. The application for service shall state clearly the class, scope and type of use to be made of the service, as well as the purpose for which it will be used.
- 2.2 The application and these rules and regulations constitute the contract between the customer and the Utility and each customer, by the accepting of sewer service agrees to be bound thereby.

- 2.3 A new application must be made to and approved by the Utility upon any change in the identity of the contracting customer at a property or in the service as described in the application. The Utility may discontinue the sewer service until such new application has been made and approved.
- 2.4 Each application for service shall be made on the basis of rates applicable to customers under the existing ordinances.

Section 3 Service Connection

- 3.1 Each building shall be connected through a separate sewer line,
- 3.2 There shall be two (2) classes of building sewer permits: (a) for residential and commercial service, and (b) for service to establishments producing industrial wastes. In either case, the owner or his agent shall make application to the Utility. The permit application shall be supplemented by any plans, specifications, or other information considered pertinent in the judgement of the Utility. A permit and inspection fee of \$150.00 dollars for a residential or commercial building sewer permit and \$500.00 dollars for an industrial building sewer permit shall be paid to the Utility at the time the application is filed.
- 3.3 All costs and expense incident to the installation and connection of the building sewer shall be borne by the owner. The owner shall indemnify the Utility from any loss or damage that may directly or indirectly be occasioned by the installation of the building sewer.
- 3.4 Old building sewers may be used in connection with new buildings only when they are found, on examination and test by the Utility, to meet all requirements of this ordinance.
- 3.5 All sewer connections must meet specifications set forth in City Ordinance No. 1075.
- 3.6 All service lines from the sewer main to the customer's building shall be approved by the Utility as to size, kind of pipe and installation, and shall be installed and kept in good repair by the customer at his expense.
- 3.7 The Utility shall in no event be responsible for maintenance of or damage caused by sewer escaping from the service line or any other pipe or fixture. The customer at all times shall comply with state and municipal regulations in reference thereto and shall make any changes thereon which may be required because of change of grade, relocation of mains or otherwise.
- 3.8 The property owner will be responsible for the cleanout of any stoppage of the sewer service line from the sewer main to the dwelling or other types of structures
- 3.9 The use of sewer service by a customer shall be in accordance with the class, scope, and type of use and for the purpose stated in his application and service contract. A customer shall not use or allow use of sewer service through his service facilities for others or for purposes other than those covered by his application. To make service available for other purposes or character of use a new application and contract is required.

Section 4 Bills

- 4.1 Each customer is subject to a minimum charge, the amount of which is set forth in the Schedule of Rates.
- 4.2 Bills for sewer service will be rendered and are due and payable as specified on the Schedule of Rates.
- 4.3 The presentation or non-presentation of a bill shall not be held to be a waiver of any of the rules or regulations.

Section 5 Discontinuance of Services

- 5.1 Whenever the customer desires to have his service contract terminated or his sewer service discontinued, he shall notify the Utility to that affect.
- 5.2 Service to any customer may be discontinued for violation of any of these rules and regulations. However, before service may be discontinued for any violation, the Utility shall give at least five (5) days written notice to the customer, stating the rule violated, the manner of violation, and the date after which service will be discontinued if the violation continues, with exception to disconnect due to invalid checks or obtaining service by fraudulent means. After service is thus discontinued for violation of rules and regulations, service will not be resumed until reasonable assurance is given that the customer will comply with the rules and regulations and until the Utility is reimbursed for costs of discontinuance and restoration of service.

Section 6 Customer Deposits

- 6.1 The Utility has the right to require a deposit of \$50.00 for those residential customers with sewer service only. The Utility will refund said deposit on notice to disconnect service and after payment in full has been made for all service rendered.
- 6.2 The payment of any undisputed bill within the meaning of these rules shall be payment of the bill within twenty (20) days following presentation of the bill, or the payment of any contested bill, payment of which is withheld beyond the period herein mentioned and the dispute is terminated substantially in favor of the customer and payment made by the customer within ten (10) days thereafter.

Section 7 Customer Service Charges

- 7.1 The Utility will require a service fee of \$_____ to be charged an applicant for service or an existing customer who is requesting service at a new location.
- 7.2 The Utility will assess the customer a \$_____ charge upon receipt of an invalid check other than in case of a bank error.
- 7.3 The Utility will charge a \$_____ collection fee when a trip to the customer's premises is required to collect for service.

Section 8 Miscellaneous

- 8.1 The Utility will not be liable for any claim or damage arising from the breaking of machinery or other facilities, or for any other cause.**
- 8.2 No agent or employee of the Utility shall have the right or authority to bind it by any promise, agreement or representation contrary to the letter or intent of these rules and regulations.**
- 8.3 The Utility reserves the right to alter or amend these rules and regulations in the manner provided by law.**

SEWER STOPPAGE/OVERFLOW QUESTIONS for Customer Service Representatives

1. Is the sewer backing up into the home, or just "slow" to drain?
2. Is this happening in all drains (toilets, baths) or just one?
3. Will the customer of record be the address in question?
4. What is phone or cell number that the customer can be reached on?
5. Has a plumber been contacted?
6. Is a plumber on site at this time?
7. If an overflow is reported to be running down the street, ask for the closest house number or street name (report to NOC).
8. If customer reports home flooding due to sewer backup:
 - a. Do not offer to provide clean-up services.
 - b. Create service order for NOC to dispatch a construction crew to check mains and manholes in the service area.
 - c. Ask the customer if their service line clean-out cap has been removed (if this advise is given, be sure to let customer know to open cap with caution as sewer will be under pressure and likely to spray from opening; also that the cap will have to be replaced once overflow stops).
 - d. Have customer call a plumber to check their service line.
 - e. Inform customer of their need to contact their homeowner's insurance agent to determine coverage and/or liability, and to ask agent what actions to take.
 - f. For after-hours callout, inform customer that the NOC/Safety Director will contact them during regular business office hours.

City Corporation "B" Report Procedures

Purpose - the "B" Report is used as an enforcement tool to ensure that privately owned plumbing, both water and sewer is maintained to required standards in order to protect the health, safety, and the environment for City Corporation Customers. The *Arkansas Plumbing Code* is used as the standard reference; more stringent local ordinance and codes may also be cited for references.

Scope - this procedure shall be applicable to water and/or sewer customers in the City Corporation service area. A licensed City Corporation plumbing inspector will make final determination of compliance with the required standards. Failure to meet the "B" Report requirements will result in termination of service.

Procedures:

1. Business Office is notified of possible plumbing code violation:
 - a) Business Office will create a service order for a "B" Report inspection.
 - b) Network Operations Center (NOC) will dispatch a licensed plumbing inspector to the address. Assignment of service orders will be rotated among all City Corporation licensed plumbing inspectors.
 - c) Plumbing Inspector will conduct inspection at reported address. Results will be hand written on blank "B" Report form and turned into NOC.
 - d) If no violation is found, the service order is closed with notes on the address. No "B" Report is filed. No further action is required.

2. Plumbing Inspector identifies a violation:
 - a) Plumbing Inspector will leave a door hanger with violation notice and required corrective actions.
 - b) Plumbing Inspector will meet with Safety Coordinator to discuss violation. Safety Coordinator may contact others for input. Utility officials and/or Arkansas Department of Health (ADH) officials shall be notified.
 - c) NOC will reschedule the original "B" Report inspection service order to a date coinciding with the required repair date written on the "B" Report by the Inspector/Coordinator.
 - d) Safety Coordinator will draft correspondence to accompany the original "B" Report to the customer stating the required actions and completion due date. Correspondence will be sent by certified mail.
 - e) NOC will dispatch plumbing inspector (preferably the inspector sent on the initial service order) to determine if required repairs were made by due date.

Procedures: (cont.)

- f) Plumbing inspector will conduct follow-up inspection. Results will be hand written on blank "B" Report form and turned into NOC.

3. Required actions and dates:

- a) If the follow-up inspection reveals that the customer has made repairs by the due date, the service order is closed, notes are entered on the service address, and no further action is required.
- b) If the customer fails to complete repairs in the required time:
 - o Plumbing Inspector will notify NOC and pull the water meter. The meter will be stored separately from regular inventory meters in the meter maintenance shop.
 - o NOC will add notes to disconnect order requesting the Administration Department to place service address on hold until required actions completed.
 - o NOC dispatches service order to disconnect water and/or sewer service at the customer's address. Safety Coordinator is notified upon completion.
- c) All printed correspondence will be maintained in a file cabinet located in the Business Office. Electronic files will be saved in the "Sewer B Reports" folder located in the "PC300" folder, inside the "Public" folder on the network.
- d) At the General Manager's discretion, certain violations discovered on a "B" Report inspection will be forwarded directly to the local State Plumbing Inspector for compliance actions.

CITY CORPORATION "B" REPORT

WATER _____ SEWER _____

Report Number: _____

Date: _____

Service Location: _____

Customer Name: _____

Mailing Address: _____

Notice: The plumbing installation at this service location has violations of the Arkansas State Plumbing Code and/or City Corporation regulations as listed below. You are directed to change this installation to meet these requirements within _____ days. Failure to comply will result in charges against plumber's license, legal action, and disconnection of water service. If there are any questions, contact City Corporation immediately @ 479-968-2105, extension 117.

Code Violation & Description:

Action to be taken:

Inspector: _____

License Number: _____ Signature: _____

CITY CORPORATION "B" REPORT

.....example.....

WATER _____ SEWER _____

Report Number: YY-## (consecutive)

Date: (use inspection date)

Service Location: _____

Customer Name: _____

Mailing Address: _____

Notice: The plumbing installation at this service location has violations of the Arkansas State Plumbing Code and/or City Corporation regulations as listed below. You are directed to change this installation to meet these requirements within (0-30) days. Failure to comply will result in charges against plumber's license, legal action, and disconnection of water service. If there are any questions, contact City Corporation immediately @ 479-968-2105, extension 117.

Code Violation & Description:

Action to be taken:

Inspector: _____

License Number: _____ Signature: _____

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

.....example letter.....

October 7, 2008

John Doe
1234 N Arkansas Ave
Russellville, AR 72802

Mr. Doe:

Please find the enclosed City Corporation "B" Report, No. 08-##. This report is used to notify the property owner of violations with the Arkansas State Plumbing Code or City Corporation plumbing regulations.

On September 24, 2008, violation found at service location, as a result of some problem or act of nature. This is a violation of Arkansas State Plumbing Code No. ###, and deemed a hazard to human health and the local environment.

You are hereby notified of the requirement to list corrective action, so that your service line is fully operational no later than ## days from the date of this report. A City Corporation plumbing inspector must conduct a follow-up inspection at this address to determine compliance with the requirements of this "B" Report.

If you are not the property owner, it is your responsibility to notify the owner of the required repairs. You must notify this office upon completion of required actions so that a follow-up inspection can be scheduled. If you have any questions, call me at 968-2105.

Respectfully,

Ricky, Harry, Jeremy, or Jim
Plumbing Inspector

cc: Kenny Lutz
NOC
Bill Bolin
Inspector

3/17/2010

APPENDIX X

DRY/WET WEATHER PEAKING



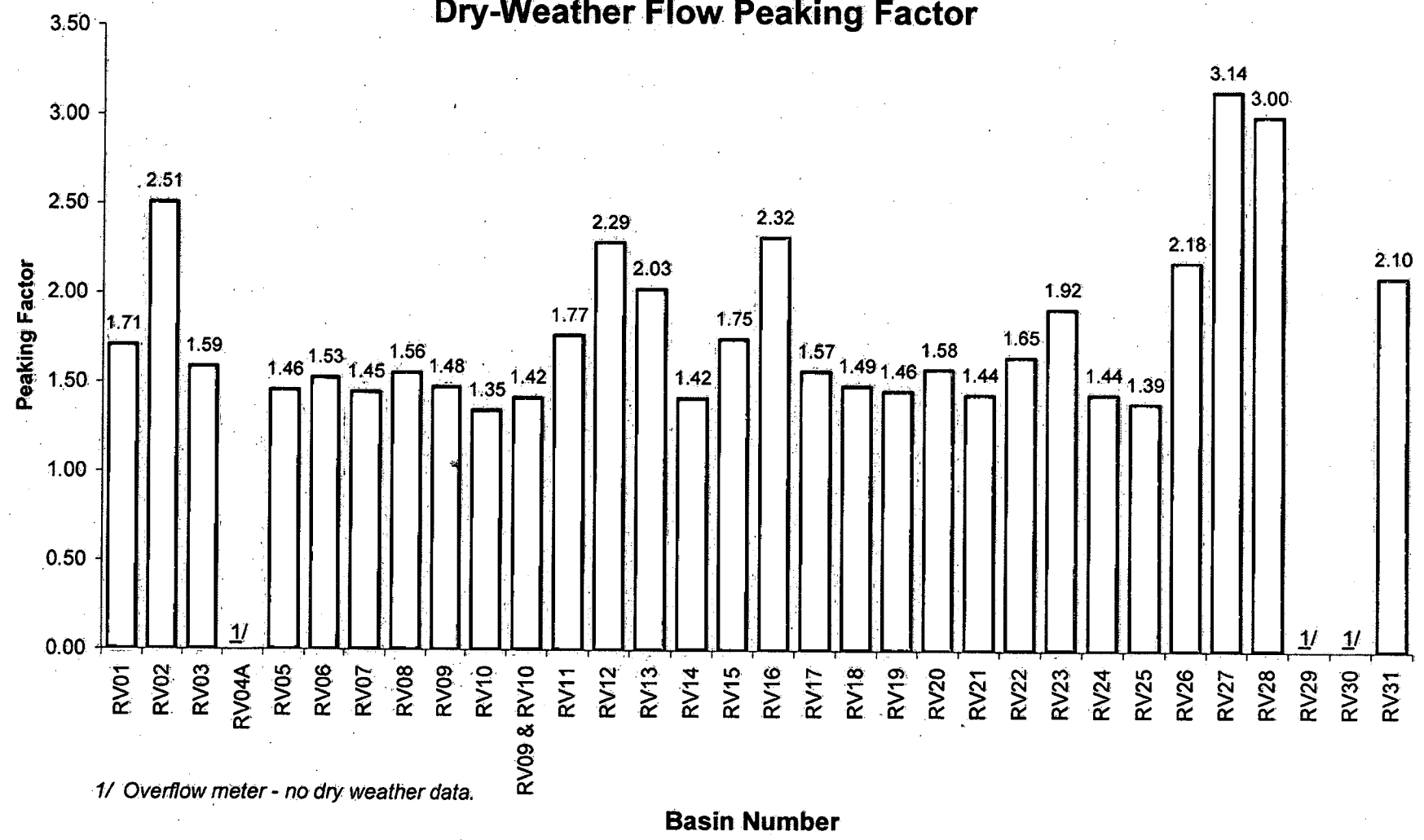
Table 2-D

**DRY-WEATHER FLOW PEAKING FACTOR
DRY WEEK 04/16/2010 TO 04/22/2010**

Meter Number	Cumulative Average Daily Dry-Weather Flow (mgd)	Cumulative Peak Hourly Flow Rate (mgd)	Cumulative Average Daily Dry-Weather Peaking Factor
RV01	1.097	1.874	1.71
RV02	0.657	1.651	2.51
RV03	0.310	0.492	1.59
RV04A	0.000	1/	1/
RV05	0.138	0.202	1.46
RV06	0.019	0.029	1.53
RV07	2.754	3.986	1.45
RV08	0.054	0.084	1.56
RV09	0.186	0.276	1.48
RV10	0.172	0.232	1.35
RV09 and RV10	0.358	0.508	1.42
RV11	0.148	0.262	1.77
RV12	0.034	0.078	2.29
RV13	0.095	0.193	2.03
RV14	0.542	0.768	1.42
RV15	0.148	0.259	1.75
RV16	0.084	0.195	2.32
RV17	0.089	0.140	1.57
RV18	0.280	0.416	1.49
RV19	0.098	0.143	1.46
RV20	0.523	0.827	1.58
RV21	0.142	0.204	1.44
RV22	0.124	0.204	1.65
RV23	0.159	0.306	1.92
RV24	0.232	0.334	1.44
RV25	0.101	0.140	1.39
RV26	0.213	0.465	2.18
RV27	0.028	0.088	3.14
RV28	0.018	0.054	3.00
RV29	0.000	1/	1/
RV30	0.000	1/	1/
RV31	0.134	0.282	2.10
Total			1.79
			(Average)

1/ Overflow meter - no dry weather data.

Dry-Weather Flow Peaking Factor



1/ Overflow meter - no dry weather data.

Table 2-E

SUMMARY OF INFILTRATION RATES

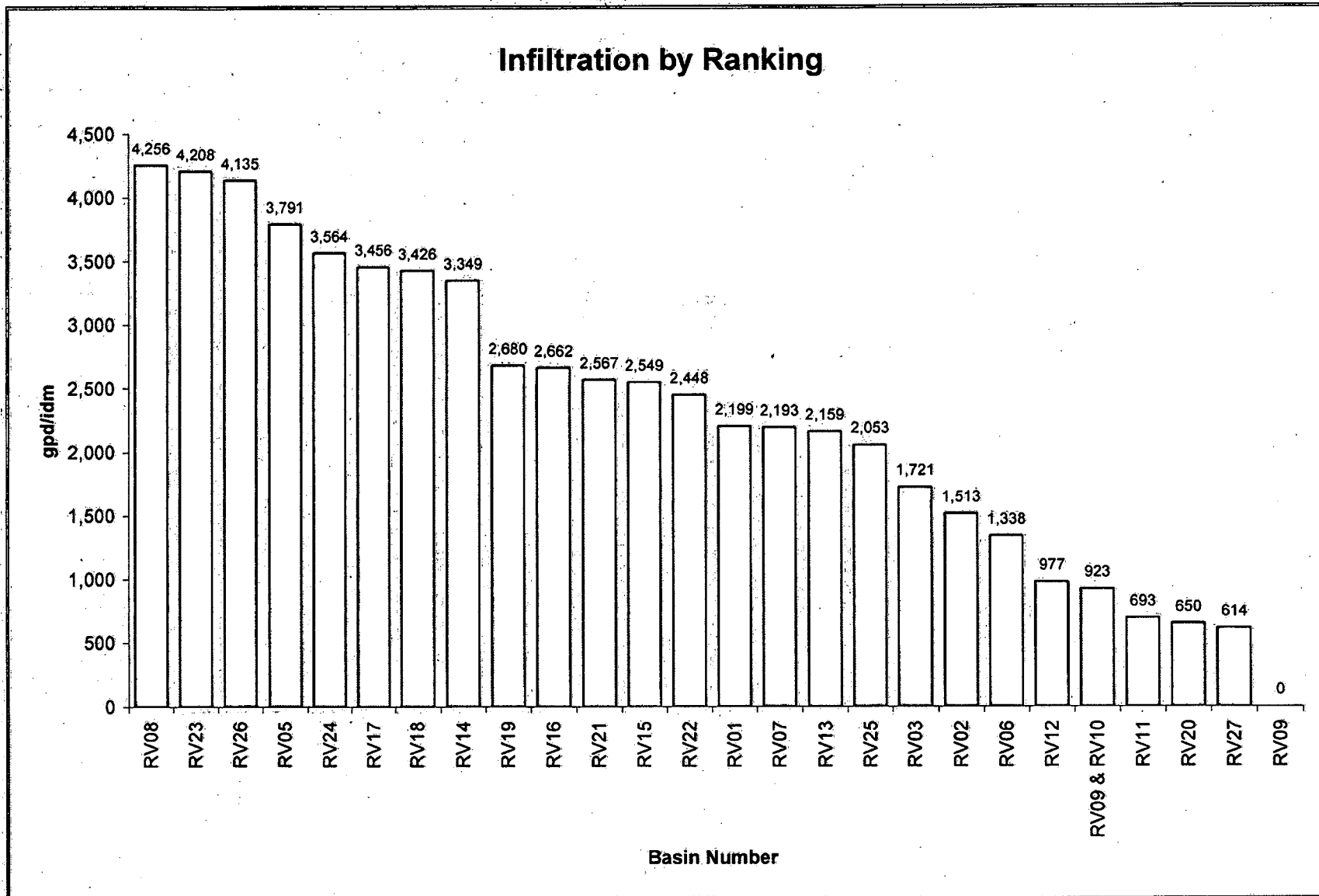
Meter Number	Inch-Diameter-Miles (idm)	Cumulative Peak Monitored infiltration (mgd)	Basin Peak Monitored infiltration (mgd)	Basin Peak Unit Infiltration (gpd/idm)	Basin Peak Unit Infiltration Ranking
RV01	50.03	0.216	0.110	2,199	14
RV02	70.30	0.106	0.106	1,513	19
RV03	68.58	0.296	0.118	1,721	18
RV04A	N/A	0.000	N/A	1/	N/A
RV05	42.61	0.162	0.162	3,791	4
RV06	12.33	0.017	0.017	1,338	20
RV07	150.39	2.595	0.330	2,193	15
RV08	23.11	0.098	0.098	4,256	1
RV09	67.53	0.098	N/A	0	N/A
RV10	N/A	0.066	N/A	1/	N/A
RV09 & RV10	67.53	0.164	0.062	923	22
RV11	54.57	0.070	0.038	693	23
RV12	32.42	0.032	0.032	977	21
RV13	41.99	0.091	0.091	2,159	16
RV14	91.11	0.684	0.305	3,349	8
RV15	76.45	0.195	0.195	2,549	12
RV16	69.06	0.184	0.184	2,662	10
RV17	23.68	0.082	0.082	3,456	6
RV18	81.63	0.412	0.280	3,426	7
RV19	49.32	0.132	0.132	2,680	9
RV20	60.72	0.298	0.039	650	24
RV21	30.71	0.079	0.079	2,567	11
RV22	73.46	0.180	0.180	2,448	13
RV23	26.78	0.113	0.113	4,208	2
RV24	63.69	0.301	0.227	3,564	5
RV25	34.59	0.071	0.071	2,053	17
RV26	43.73	0.196	0.181	4,135	3
RV27	24.42	0.015	0.015	614	25
RV28	37.04	0.000	0.000	0	26
RV29	N/A	0.000	N/A	1/	N/A
RV30	N/A	0.003	N/A	1/	N/A
RV31	N/A	0.023	0.023	4/	N/A
Total	1,467.77		3.268	2,227 (average)	

1/ Overflow meter.

2/ Not significant source of infiltration.

3/ Combined flow meter due to location.

4/ Monitored outside City.



APPENDIX Y

OVERFLOW RESPONSE PLAN



CITY CORPORATION
RUSSELLVILLE, ARKANSAS

**CITY CORPORATION –
RUSSELLVILLE WATER AND SEWER SYSTEM**

**CAO LIS No 09-146
AFIN 58-00105**

NPDES Permit No. AR0021768

OVERFLOW RESPONSE PLAN

Prepared By:

CWB Engineers, Inc.

February 2010

**City Corporation – Russellville Water and Sewer System
SANITARY SEWER OVERFLOW RESPONSE PLAN**

I. BACKGROUND INFORMATION

City Corporation entered into a Consent Administrative Order (CAO) with the Arkansas Department of Environmental Quality (ADEQ) with an effective date of December 25, 2009. As a result of this CAO, City Corporation was required to establish and implement an Overflow Response Plan. The following document establishes the Overflow Response Plan of Russellville City Corporation.

II. NPDES PERMIT

- A. National Pollutant Discharge Elimination System (“NPDES”)
NPDES Permit # AR0021768
AFIN 58-00105
CAO LIS No. 09-146
Issued by Arkansas Department of Environmental Quality**

III. GENERAL

The Sanitary Sewer Overflow Response Plan (SSORP) is designed to ensure that every report of a confirmed sewage overflow is immediately dispatched to the appropriate crew so that the effects of the overflow can be minimized with respect to impacts to public health, beneficial use, quality of surface waters, and customer service. The SSORP further includes provisions to ensure safety pursuant to the directions provided by the ADEQ and that notification and reporting is made to the appropriate local, state, and federal authorities. For purposes of this SSORP, “confirmed sewage spill” is also sometimes referred to as “sewer overflow,” “overflow,” or sanitary sewer overflow “SSO”. The effective date of this plan will be **February 23, 2010**.

A. Objectives

The primary objectives of the SSORP is to protect public health and the environment; comply with regulatory agencies and waste discharge permit conditions, and minimize risk of enforcement actions against Russellville City Corporation.

Additional objectives of the SSORP are as follows:

- Provide appropriate customer service;
- Protect wastewater treatment plant and collection system personnel;

- Protect the collection system, wastewater treatment facilities, and all appurtenances; and
- Protect private and public property beyond the collection and treatment facilities.

This plan shall not supersede existing emergency plans or standard operating procedures (SOPs).

B. Organization of Plan

The key elements of the SSORP are addressed individually as follows:

Section IV	Overflow Response Procedure
Section V	Public Advisory Procedure
Section VI	Regulatory Agency Notification Plan
Section VII	Media Notification Procedure
Section VIII	Distribution and Maintenance of SSORP

C. SSO Tracking

A procedure to track the frequency, type, and location of SSOs has been prepared under Appendix A.

Data on each SSO occurrence is maintained in a database that can be analyzed based on certain SSO parameters. The database is maintained and organized by the Network Operations Center/Safety Director.

IV. OVERFLOW RESPONSE PROCEDURE

The Overflow Response Procedure presents a strategy for Russellville City Corporation to mobilize labor, materials, tools, and equipment to correct or repair any condition which may cause or contribute to an unpermitted discharge. The plan considers a wide range of potential system failures that could create an overflow to surface waters, land, or buildings.

A. Receipt of Information Regarding an SSO

A SSO may be detected by employees or by others. The Customer Service Representatives are primarily responsible for receiving phone calls from the public of possible SSOs from the wastewater collection system, and forwarding service requests to the Network Operations Center/Central Dispatch (NOC). The Network Operations Center will then dispatch the appropriate Response Crew.

Generally, Customer Service Representatives receive telephone calls from the public reporting possible SSOs. However, a telephone call received after hours will be directed to the 24-hour emergency phone line. A phone call of this type will be received by the After Hours Emergency Crew, which will be the Response Crew.

1. The Network Operations Center obtains all relevant information available regarding the possible overflow including:
 - a. Time and date call was received;
 - b. Specific location;
 - c. Description of problem;
 - d. Time and date overflow was observed;
 - e. Caller's name and phone number;
 - f. Observations of the caller (e.g., odor, duration, back, or front of property); and
 - g. Other relevant information that will enable the responding Emergency crews to quickly locate, assess and stop the SSO.

The Network Operations Center then records/inputs the possible SSO information and creates a service request for assignment to the proper Response Crew.

2. Pump station failures are monitored and received by operators on duty at the Wastewater Treatment Plant. The operator on duty immediately conveys all information regarding alarms to the Operations Manager to initiate the investigation. The Investigating Crew determines if failure resulted in an overflow and reports to Network Operations Center, if a SSO has occurred. A completed overflow form shall be sent, via e-mail or interoffice mail to the Network Operations Center for documentation.

3. SSOs detected by any personnel in the course of their normal duties are reported immediately to the Network Operations Center who records all relevant SSO information and dispatches an Emergency crew and additional response crews, as needed.

4. After hours emergency crew or response crew confirms the SSO. Until verified, the report of a possible spill will not be referred to as a "sewer overflow."

If an overflow has occurred, the crew leader completes the appropriate Overflow Report form (See Figure IV-1). Within 24 hours of the sewer investigator's confirmation, overflow report information is forwarded to the Network Operations Center, or designated back-up personnel, who then enters the data into the SSO database. The Pretreatment Coordinator is responsible for complying with all ADEQ notification reporting requirements. Table IV-1 summarizes the SSO response tracking protocol.

FIGURE IV-1. 24-HOUR SANITARY SEWER OVERFLOW REPORT

After the overflow is detected, this completed form must be faxed or e-mailed to the address below within 24 hours.

Send Overflow Report to: Water Enforcement by: Phone: 501-682-0639; Fax: 501-682-0910 or E-Mail: WaterEnfSSO@adeq.state.ar.us

Facility Permit Number: _____ **Facility Name:** _____
Date Overflow Began: _____ **Time:** _____ **Date Overflow Ended:** _____ **Time:** _____

Description: _____ **Comments:** _____ **Cause of SSO:** _____ **Additional Comments:** _____
(Give address, manhole number-if numbered. Include where the overflow went-yard, ditch, stream, storm sewer, building, other).

- Manhole Overflow _____
- Lift Station Overflow _____
- Main Line Overflow _____
- Service Line Overflow _____
- Other: Describe _____

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

Volume: _____ *(Give an estimate in gallons)*

Action Taken - Check all that apply

- (Short term and long-term action, including clean-up and any plans to remediate I & I)*
- Machine rodded
 - Jet-Vac
 - Hand rodded
 - Used Generator To Power Pumps/Equipment
 - Other - Describe: _____
 - Disinfected and Deodorized
 - Hydro Cleaned
 - Spread Lime on Affected Area
 - Public Notification

Environmental Damage:

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

Reported By _____ **Title** _____ **Telephone Number** _____

TABLE IV-1. SSO RESPONSE TRACKING PROTOCOL

SSO RESPONSE TRACKING

1. Crew that locates overflow notifies Network Operations Center.
2. Crew that locates overflow completes overflow report.
3. Response Crew cleans and sanitizes.
4. Response Crew installs warning signs.
5. Construction Supervisor or Network Operations Center verifies overflow report is correct.
6. Response Crew takes photographs before cleanup.
7. Construction Supervisor verifies cleanup is done correctly.
8. Construction Supervisor removes warning signs.
9. Construction Supervisor takes photographs after cleanup.
10. Construction Supervisor verifies overflow reports are turned into Network Operations Center (Immediately following cleanup or first business day following cleanup, if after hours).
11. Network Operations Center down loads photographs into database.
12. Network Operations Center enters overflow information into the SSO database.
13. Pretreatment Coordinator or Network Operations Center reports SSO data to ADEQ and other departments as required by NPDES Permits

B. Dispatch of Appropriate Crews to Site of Sewer Overflow

Failure of any element within the wastewater collection system that threatens to cause or causes an SSO triggers an immediate response to isolate and correct the problem. Crews and equipment are available to respond to any SSO location 24-hours a day. Additional maintenance personnel are designated "on call" in the event extra crews are needed. Appendix B summarizes the SSO Response Plan.

1. Dispatching Crews

- Network Operations Center receives notification of possible SSOs as outlined in Section IV.A "Receipt of Information Regarding an SSO" and dispatch a Response crew or the appropriate crews and resources as required.
- Network Operations Center notifies the appropriate Supervisor, Coordinator, or Manager by phone or radio regarding SSOs and field crew locations.

2. Crew Instructions

- The Construction Supervisor coordinates with the Network Operations Center on a daily basis as to the appropriate Response Crews. Additionally, the Construction Supervisor provides instructions regarding appropriate materials, supplies, and equipment needed.
- All employees being dispatched to the site of a SSO proceed immediately to the site of the overflow. Report any delays or conflicts in assignments immediately to the Network Operations Center for resolution.
- In all cases response crews report their findings, including possible damage to private and public property to the Network Operations Center immediately upon making their investigation. If Network Operations Center has not received findings from the field crew within 1 hour, they shall contact the response crew to determine the status of the investigation.

3. Additional Resources

- Network Operations Center receives and conveys to appropriate parties requests for additional personnel, material, supplies, and equipment from crews working at the site of a SSO.

4. Preliminary Assessment of Damage to Private and Public Property

- The focus is to resolve the problem. The response crews use discretion in assisting the property owner/occupant as reasonably as they can. Be aware that Russellville City Corporation could face increased liability for any further damages inflicted to private property during such assistance. In the event the SSO occurs inside a structure,

the Construction Supervisor shall be notified. The Construction Supervisor shall personally assess and document all damages as well as notify Operations Manager of event. The response crew shall enter private property for purposes of assessing damage. Crew shall take appropriate still photographs, if possible, of the area of the SSO and impacted area in order to thoroughly document the nature and extent of impact.

5. Field Supervision and Inspection

- The Construction Supervisor, visits the site of the SSO, if possible, takes photos and installs warning sign to ensure that provisions of this overflow response plan and other directives are met.

6. Coordination with Hazardous Material Response

- Upon arrival at the scene of a SSO, should a suspicious substance (e.g., oil sheen, foamy residue) be found on the ground surface, or should a suspicious odor (e.g., gasoline) not common to the sewer system be detected, the responding crew should secure the immediate area; then, contact the Safety Manager. **Remember that any vehicle engine, portable pump or open flame (e.g., cigarette lighter) can provide the ignition for an explosion or fire if flammable fluids or vapors are present. Keep a safe distance and observe caution until assistance arrives.**
- Only after the Safety Manager determines it is safe and appropriate for personnel to resume activities can they then proceed under the SSORP with the containment, clean-up activities and remediation.

C. **Overflow Correction, Containment, and Clean-Up**

SSOs of various volumes occur from time to time in spite of concerted prevention efforts. Spills may result from blocked sewer lines, pipe failures, or mechanical malfunctions among other natural or man-made causes. Russellville City Corporation is constantly on alert and ready to respond upon notification and confirmation of an overflow.

This section describes specific actions to be performed by the crews during a SSO.

The objectives of these actions are:

- To protect public health, environment and property from sewage overflows and restore surrounding area back to normal as soon as possible;
- To promptly notify the regulatory agency's communication center of preliminary overflow information and potential impacts;
- To contain the SSO to the maximum extent possible including preventing the discharge of sewage into surface waters; and
- To minimize the Russellville City Corporation exposure to any regulatory agency penalties and fines.

Under most circumstances, Russellville City Corporation handles all response actions with its own maintenance forces. They have the skills and experience to respond rapidly and in the most appropriate manner. An important issue with respect to an emergency response is to ensure that the temporary actions necessary to divert flows and repair the problem do not produce a problem elsewhere in the system. For example, repair of a force main could require the temporary shutdown of the pump station and diversion of the flow at an upstream location. If the closure is not handled properly, sewage system backups may create other overflows.

Circumstances may arise when the Russellville City Corporation could benefit from the support of private-sector construction assistance. This is especially true in the case of large diameter pipes buried to depths requiring sheet piling and dewatering. Russellville City Corporation may also choose to use private contractors for open excavation operations that might exceed one day to complete.

1. Responsibilities of Response Crew Upon Arrival

It is the responsibility of the first personnel who arrive at the site of a SSO to protect the health and safety of the public by mitigating the impact of the SSO to the extent possible. If the SSO is discovered to be a private overflow and not the responsibility of Russellville City Corporation, the Response Crew will notify the resident of the situation and recommend they contact a private plumber to mitigate the problem. Russellville City Corporation will dispatch a Plumbing Inspector to inspect and monitor the site to insure the resident has taken the appropriate action to correct the problem.

Upon arrival at an SSO, the response crew:

- Determines the cause of the overflow: sewer line blockage, pump station mechanical or electrical failure, sewer line break, etc.;

- Identifies and requests, if necessary, assistance or additional resources to correct the overflow or to assist in the determination of its cause;
- Takes immediate steps to stop the overflow, e.g. relieves pipeline blockage, manually operates pump station controls, repairs pipe, etc. Extraordinary steps may be considered where overflows from private property threaten public health and safety (e.g., an overflow running off of private property into the public right-of-way); and
- Requests additional personnel, materials, supplies, or equipment that will expedite and minimize the impact of the SSO.

2. Initial Measures for Containment

Initiate measures to contain and/or recover the overflowing sewage in order to minimize the impact to public health or the environment.

- Determine the immediate destination of the SSO, e.g. storm drain, street curb gutter, body of water, creek bed, etc.;
- Identify and request the necessary materials and equipment to contain or isolate the overflow, if not readily available; and
- Take immediate steps to contain the overflow, e.g., block or bag storm drains, recover through vacuum truck, divert into downstream manhole, etc. if conditions allow as determined by the Response Crew.

3. Additional Measures - Prolonged Overflow Conditions

In the event of a prolonged sewer line blockage or a sewer line collapse, it may be necessary to set up a portable bypass pumping operation around the obstruction.

- Take appropriate measures to determine the proper size and number of pumps required to effectively handle the sewage flow.
- Implement continuous or periodic monitoring of the bypass pumping operation, as required.
- Address regulatory agency issues in conjunction with emergency repairs.

4. Cleanup

SSO sites are to be thoroughly cleaned after an overflow. No readily identified residue (e.g., sewage solids, papers, rags, plastics, rubber products) is to remain.

- Where practical, thoroughly flush the area and remove any sewage or wash-down water. Solids and debris are to be swept, raked, picked-up, and transported for proper disposal.
- Secure the overflow to prevent contact by members of the public until the site has been thoroughly cleaned. If posting is required, refer to Section V.
- Where appropriate, disinfect and deodorize the overflow site.
- Where sewage has resulted in ponding, pump the pond dry and dispose of the residue in accordance with applicable regulations and policies.
- If a ponded area contains sewage which cannot be pumped dry, it may be treated with bleach. If sewage has discharged into a body of water that may contain fish or other aquatic life, do not use bleach or other appropriate disinfectant and contact the Arkansas Game & Fish Commission for specific instructions.
- Use of portable aerators may be required where complete recovery of sewage is not practical and where severe oxygen depletion in existing surface water is expected.

D. Overflow Report

Response crew completes an Overflow Report Form (See Figure IV-1). Response crew promptly notifies Network Operations Center when the SSO is eliminated. Information regarding the SSO includes the following:

- Indication that the SSO reached surface waters, i.e., all SSO where sewage was observed running to surface waters, or there was obvious indication (e.g. sewage residue) that sewage flowed to surface waters.
- Indication that the SSO reached and discharged without containment into a storm drain, ditch, drop inlet, or catch basin.
- Indication that the SSO had not reached surface waters. Guidance in characterizing these overflows to include:
 - a. SSO to covered storm drains (with no public access) where personnel verify, by inspection, that the entire volume is contained

in a sump or impoundment and where complete cleanup occurs leaving no residue.

- b. Preplanned or emergency maintenance jobs involving bypass pumping if access by the public to a bypass channel is restricted and subsequent complete clean up occurs leaving no residue. Any preplanned bypass under these circumstances will not be considered an overflow; and
 - c. SSOs where observation or on-site evidence clearly indicates all sewage was retained on land and did not reach a surface water and where complete cleanup occurs leaving no residue.
- Determine the start time of the SSO by one of the following methods:
 - a. Date and time information received and/or reported to have begun and later substantiated by the Response Crew;
 - b. Visual observation; or
 - c. Pump station and lift station flow charts and other recorded data.
 - Determine of the stop time of the SSO by one of the following methods:
 - a. When the blockage is cleared or flow is controlled or contained; or
 - b. The arrival time of the Response Crew, if the SSO stopped between the time it was reported and the time of arrival.
 - Visual observations

An estimation of the rate of SSO in gallons per minute (GPM) by one of the following criteria

 - a. Direct observation of the overflow. See Appendix C for guidance on estimating sewer overflow rates.
 - b. Measurement of actual overflow from the sewer main.
 - Determination of the volume of the SSO:
 - a. When the rate of overflow is known, multiply the duration of the overflow by the overflow rate; or
 - b. When the rate of overflow is not known, investigate the surrounding area for evidence of ponding or other indications of overflow volume.

- Photographs of the event, before and after cleanup, when possible.
- Assessment of any damage to the exterior areas of public/private property. Personnel shall enter private property only for purposes of estimating damage to structures, floor and wall coverings, and personal property.

E. Customer Satisfaction

When a SSO is reported by a citizen, the Network Operations Center will notify the Front Office or Customer Service Representatives when all work is completed on the SSO. The Customer Service Representative will then contact the reporting citizen and discuss the actions taken and the resolution of the problem.

V. PUBLIC ADVISORY PROCEDURE

This section describes the appropriate actions of Russellville City Corporation, in cooperation with ADEQ and the Arkansas Department of Health to limit public access to areas potentially impacted by unpermitted discharges of pollutants to surface water bodies from the wastewater collection system. Temporary and permanent public notice will be provided as indicated below. Sample notices are provided in Appendix D.

A. Temporary Public Notice

Russellville City Corporation has primary responsibility for determining when to post notices of polluted surface water bodies or ground surfaces that result from uncontrolled wastewater discharges from its facilities. The postings do not necessarily prohibit use of recreational areas, unless posted otherwise, but provide a warning of potential public health risks due to sewage contamination.

Table V-1 outlines the decision process to recommend to the General Manager that posting of a confirmed SSO be undertaken or that there is reasonable potential for an SSO to occur thus the need to post in advance. If posting is deemed necessary, ADEQ shall be notified.

B. Permanent Public Notice

Russellville City Corp shall place a permanent notice at manholes located on City owned property that may experience SSO's more than once in any twelve-month period. A list of applicable manholes has been provided in Appendix A, Table A-1.

Table V-1. Decision Matrix to Post Temporary Signage

Action Taken	
1	Construction Supervisor or Response Crew confirms SSO that is not posted has resulted in ponded wastewater (ground surface or ditch ponding), or direct discharge to body-contact recreational waters between May 1st and September 30th.
2	Construction Supervisor notifies Network Operations Center and provides relevant SSO information. <ul style="list-style-type: none"> a) SSO Location b) Remedial actions being taken
3	Network Operations Center consults with Construction Supervisor on remedial actions and posting requirements, if necessary.
4	Network Operations Center consults General Manager for final decision on posting
5	If General Manager decides posting is required, Manager directs Construction Supervisor to post warning sign(s).
6	Warning sign(s) is/are posted by Construction Supervisor or Response Crew.

C. Other Public Notification

If the General Manager determines additional public notification is needed, the Network Operations Center will make said notifications under the General Manager's direction.

VI. REGULATORY AGENCY NOTIFICATION PLAN

The Regulatory Agency Notification Plan establishes procedures that Russellville City Corporation follows to provide formal notice to the ADEQ as necessary in the event of SSOs. The reporting criteria below explains to whom various forms of notification should be made, and lists agencies/individuals to be contacted.

Agency notifications will be performed in parallel with other internal notifications. The procedures for notifying the media of an SSO is presented in Section VII - Media Notification Procedure. Internal notification and mobilization of personnel are detailed in Section IV - Overflow Response Procedure.

A. Immediate Notification

Upon data entry of a SSO event, the Network Operations Center will make the proper notifications as detailed in the following section. For reference, the applicable NPDES Permit reporting requirements are reprinted below.

“The permittee shall report all overflows with the Discharge Monitoring Report (DMR) submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: The date, time, duration, location, estimated volume, and cause of overflow; observed environmental impacts from the overflow; action taken to address the overflow; and ultimate discharge location if not contained (e.g. storm sewer system, ditch, tributary). Overflows, which endanger health or the environment, shall be orally reported to this department (Enforcement Section of Water Division) within 24 hours from the time the permittee becomes aware of the circumstance. A written report of overflows which endanger health or the environment, shall be provided within 5 days of the time the permittee becomes aware of the circumstance.”

The Network Operations Center is responsible for meeting the 24-hour oral or fax notification requirement. The name, mailing address, e-mail address, telephone and fax number for 24-hour reporting to ADEQ is provided below:

ADEQ – Water Enforcement
P.O. Box 8913
Little Rock, Arkansas 72219-8913
Telephone: (501) 682-0639
Fax: (501) 682-0910
Email: WaterEnfSSO@adeq.state.ar.us

B. Secondary Notifications

After those parties identified in *Section A. Immediate Notification* have been contacted, the Network Operations Center will notify other federal, state, and local agencies, as well as other interested and possibly impacted parties as directed by the General Manager.

VII. MEDIA NOTIFICATION PROCEDURE

When a SSO has been confirmed and is a threat to public health, take the following actions, if necessary, to notify the media:

- A. Response Crew verifies overflow and reports back to the Network Operations Center.

- B. The Network Operations Center informs the Operations Manager and the General Manager. The primary contact should be the General Manager. Table VII-1 provides contact names and numbers for the appropriate notification.
- C. All media requests received should be referred immediately to the General Manager.
- D. The following personnel are authorized to be interviewed by the media and are the designated spokespersons:
 1. Craig Noble, General Manager
 2. Larry Collins, Operations Manager

Table VII-1. Russellville City Corporation Media Contacts

Contact	Contact Name	Office	Mobile
Primary	Craig Noble, General Manager	(479) 968-2080 Ext 113	(479) 747-2710
Backup	Larry Collins, Operations Manager	(479) 968-2080 Ext 132	

VIII. DISTRIBUTION AND MAINTENANCE OF SSORP

Annual updates to the SSORP reflect all changes in policies and procedures as may be required to achieve its objectives.

A. Submittal and Availability of SSORP

Distribute copies of the SSORP and any amendments to the following positions:

- Manager
- Operations Manager
- Pretreatment Coordinator
- Construction Manager
- Legal Counsel
- Engineering Consultants

Familiarize all other personnel who may become incidentally involved in responding to overflows with the SSORP.

B. Review and Update of SSORP

Review the SSORP annually and amend as appropriate. Russellville City Corporation should:

- Update the SSORP with the issuance of a revised or new NPDES permit or state waste discharge permit;
- Conduct annual review and training with appropriate personnel; and
- Review and update, as needed, the various contact person lists included in the SSORP.

C. Practical Resources

There will be small laminated pocket guides printed and furnished to all employees that are involved with the SSO Response Plan, which will provide an overview of the of procedures as well as essential phone numbers. There is also a reference for estimating sewer overflow volumes in Appendix C.

D. Training

A copy of the SSO Response Plan will be distributed to all employees involved in the Overflow process. A review of the plan will be conducted with each employee in a group setting or individually as determined by the employee's supervisor. This training should take place annually or when revisions occur, so that all personnel are brought up to date of any changes that may occur. Each division should also review their response efforts at these annual training sessions and take suggestions to revise procedures. These suggestions will then be submitted to all divisions for review to determine if revisions are required.

APPENDIX A SSO MONITORING AND TRACKING

The procedure to track the frequency and location of SSOs will be as defined below:

- A. All SSOs will be tracked in the Russellville City Corporation Overflow database.
- B. SSOs will be defined as Wet-Weather: (SOW = Sewer Overflow Wet-Weather), Dry-Weather: (SOD = Sewer Overflow Dry-Weather), or Private: (SOP = Sewer Overflow Private). The definition of a dry-weather overflow will be one that overflows due to an obstruction in the main line or equipment failures. The definition of a wet-weather overflow is one that has insufficient carrying capacity to handle inflow and/ or infiltration during a storm event. The definition of a private overflow is one that occurs prior to reaching the public sewer main, such as an overflow from a cleanout cap. City Corporation will maintain and update a list of SSOs.
- C. The database will include the manhole number to identify the overflow locations, which will always be the upstream manhole number of blockage or defect on the sewer main.
- D. The SSO database will contain all information required for regulatory reporting. Reports generated from the database will have the capability of pulling SSO locations based upon dates, locations, and number of occurrences within a set time frame.
- E. Monthly reports will be prepared from the database giving the number of wet-weather and dry-weather SSOs. These reports will be presented by the Operations Manager monthly at the City Corporation Board Meeting.
- F. An initial list of reported capacity related SSOs is being developed for inclusion in the Permanent Signage phase of this SSORP. The list will be developed through field investigation of City Corporation staff during rainfall events. This list shall be maintained and updated annually as conditions and overflow mitigation efforts work to improve capacity related deficiencies in the collection system. Table A-1 provides an example of the information that will be included as the list is developed.

Table A-1. SSOs Eligible for Permanent Signage

SSO Manhole Number	Subbasin Number	General Description of Location

G. A second list has been developed that defines each potential capacity related SSO manhole by its respective Storm Level. Two levels have been defined for simplicity in tracking the collection system's response to varying rainfall intensities. Storm Level A indicates an event that exceeds one inch of rainfall in a 24-hour period. These SSO manholes are early indicators of the collection system's response to wet weather conditions. Storm Level B, are SSO manholes that only trigger in excess of a two year frequency storm event. Rainfall amounts will be monitored by City Corporation and respond when Storm Level A or B has been reached. The following list, Table A-2, provides the known, or suspected, SSO manholes that have the potential to discharge during wet weather events. Initially, all overflows will be categorized as Storm Level A. Additional information will be gathered to properly categorize the manholes with their respective Storm Levels.

Table A-2. Capacity Related SSOs by Storm Level

Storm Level	Status	Manhole#	Address	# of Occurrences (past 4 years)
A	Active	1510	413 S. Commerce	1
A	Active	1564	Marina Rd.	1
A	Active	1567	C and Boston	1
A	Active	1624	115 E. Parkway	1
A	Active	1675	E. Main and Nashville	1
A	Active	1706	1022 Parker	1
A	Active	1735	1317 N. Frankfort	1
A	Active	1823	City Mall	1
A	Active	1825	N. Arkansas Ave	2
A	Active	1848	1500 N. Jackson	1
A	Active	2023	Cedar and N. Commerce	2
A	Active	2028	Birch and Commerce	2
A	Active	2032	Birch and Commerce	1
A	Active	2048	ATU Pasture	3
A	Active	2050	ATU Pasture	2
A	Active	2815	Arkansas Tech	1
A	Active	2816	Arkansas Tech	1
A	Active	2817	N Glenwood	2

A	Active	2859	321 W. B	1
A	Active	3027	2502 W 2nd St.	1
A	Active	3094	215 S. Portland	1
A	Active	3114	106 S. Hastings	1
A	Active	3193	John Trusty Lane	1
A	Active	4015	1900 E. Main	1
A	Active	4019	1611 E. Main St.	1
A	Active	4023	2209 E. Main	1
A	Active	4043	N. Glenwood	1
A	Active	4116	806 E. 4th St.	1
A	Active	4214	Flying J Truck Stop	1
A	Active	5032	E. 11th and Boston	3
A	Active	5054	14th and Boston	2
A	Active	5120	11th and Glenwood	1
A	Active	5136	111 E. 8th St.	1
A	Active	5668	710 E. 23rd	1
A	Active	6231	3509 E. 4th St.	1
A	Active	6415	300 Industrial	1
A	Active	7017	106 Lakeshore Drive	1

Status provides an indication of the confidence level in the potential for this manhole to experience an SSO. "Active" means a confirmed SSO was experienced, "Investigate" means non-verified information has lead to the inclusion on this listing and shall require field conformation, while "Pending" indicates a rehabilitation effort has been conducted with field conformation to follow to conclude positive mitigation.

- H. An annual report will be prepared by City Corporation, which shall include a review of all capacity related overflows, as well as determine updates to the two tables above for permanent signage and potential capacity related SSO manholes. These updated capacity related SSO lists shall be included for amendment to this SSORP.

APPENDIX B SSO RESPONSE PLAN SUMMARY

Public Notification of possible SSO

Notification during working hours

Customer Service Representatives (CSR) receive notification of a possible SSO from the public. The CSR will route the call to the Network Operations Center at which time all relevant information is collected, as outlined in Section IV-A. NOC will then dispatch the appropriate Response Crew to the site to verify if an SSO has occurred. The Response Crew will report findings back to NOC.

Response Crew determines if SSO has occurred and attempts to resolve problem. Response Crew completes the Overflow Report Form, takes photographs before clean-up is started, and places warning sign(s) at the site, as required. Construction Supervisor verifies Overflow Report, problem resolution, and signage have been appropriately addressed.

Response Crew begins cleanup and disinfection of the affected area. Response crew will notify Network Operations Center when cleanup is complete. NOC will dispatch Construction Supervisor to verify cleanup is completed, take photographs and remove warning signs.

Notification after hours

After Hours Emergency Crew receives direct notification of possible SSO from public at which time they collect all relevant information as outlined in Section IV-A and proceed to location. (After Hours Emergency Crew mans emergency phone after business hours)

Emergency crew determines if SSO has occurred and attempts to resolve problem then takes photographs before cleanup and places warning signs at site, as required. Emergency Crew is to fill out Overflow Report Form and turn in with their paper work at the beginning of the next workday.

Emergency crew then begins clean-up and disinfection of the affected area. When cleanup is completed, crew is to take photographs and remove warning signs.

If the SSO occurred within a structure the Construction Supervisor is to verify cleanup has been completed in a satisfactory manner. Site visit is to be performed the first work day after the overflow occurrence.

Internal Notification of possible SSO

All City Corporation personnel are directed to immediately report any potential overflow to the Network Operations Center and provide all relevant information as outlined in Section IV-A. After the overflow has been reported, all procedures will be the same as with a public notification of possible SSO above.

Rain events that are one-inch or greater will trigger our Response Crews to investigate possible recurring SSO sites to verify if an overflow has occurred. These crews will be furnished a list of possible SSO sites (see Table A-2), which has been determined as being locations that have potential to overflow. After crews have completed a check of the entire list, they will begin clean-up at each site.

APPENDIX C

SSO FLOW and VOLUME DETERMINATION

As indicated previously in this SSORP, each SSO actively discharging shall be evaluated for flow and ultimately total volume discharged, each of which is to be included as part of the reporting requirements. City Corporation has included a flow estimating system that is derived from the reaction of the manhole lid in relation to the amount of flow exiting the collection system. This system is easily field estimated without the need for measuring devices, which in most instances provide inadequate data.

The three-category rating system is outlined below:

0 – 10 gpm (gallons per minute)

This rate covers the light discharge experienced in the upper reaches of the collection system, usually with a small number of residential connections. The visual indicator would be a light flow (about the rate of a standard faucet) from around the manhole lid with no visible release of debris or solids, and no movement or lifting of the lid itself.

10 – 100 gpm

This rate covers the moderate discharge experienced in the lower reaches of the collection system, usually along the larger collector or outfall type sewer mains (typically 10" and larger mains) and in some capacity related SSOs. The visual indicator would be a noticeable flow from around the manhole lid, slight debris or solids release, and a rocking or slight lifting of the manhole lid.

Greater than 100 gpm

This rate covers the heavy discharge experienced along the major outfall sewers and larger capacity related SSOs. The visual indicator is the definite release of debris or solids, and the complete lifting or displacement of the manhole lid.

SSO volumes are computed by estimating the flow from the above data and multiplying by the duration of discharge. If the exact length of discharge is unknown, criteria for determining an estimated time has been established in the Section IV-D. Overflow Report.

**APPENDIX D
SIGNAGE FOR OVERFLOWS**

The following language shall be used on signs located on existing SSO sites during cleanup and on notices attached to homes adjacent to SSO sites:

**NOTICE OF
SANITARY SEWER OVERFLOW**

*Please avoid contact with this
sanitary sewer facility due to the
possibility of adverse health effects
until cleanup can be completed.*

**For Additional Information
Contact Keith Gray – City Corporation
(479) 968-2080 ext 134**

The following language shall be used on signs located on potential SSO sites that occur more than once in a twelve-month period:

**NOTICE OF
SANITARY SEWER OVERFLOWS
WHICH MAY OCCUR AT THIS LOCATION**

*Please avoid contact with this
sanitary sewer facility during an
Overflow condition due to the
possibility of adverse health effects
until cleanup can be completed.*

**For Additional Information
Contact Keith Gray – City Corporation
(479) 968-2080 ext 134**

APPENDIX Z

24 HOUR SSO REPORT



24-HOUR SANITARY SEWER OVERFLOW REPORT

After the overflow is detected, this completed form must be faxed or e-mailed to the address below within 24 hours.

Send Overflow Report to: Water Enforcement by: Phone: 501-682-0639; Fax: 501-682-0910 or E-Mail: WaterEnfSSO@adeq.state.ar.us

Facility Permit Number: _____ **Facility Name:** _____
Date Overflow Began: _____ **Time:** _____ **Date Overflow Ended:** _____ **Time:** _____

Description: _____ **Comments** _____ **Cause of SSO** _____ **Additional Comments** _____
(Give address, manhole number-if numbered. Include where the overflow went-yard, ditch, stream, storm sewer, building, other).

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Manhole Overflow _____
<input type="checkbox"/> Lift Station Overflow _____
<input type="checkbox"/> Main Line Overflow _____
<input type="checkbox"/> Service Line Overflow _____
<input type="checkbox"/> Other: Describe _____ | <input type="checkbox"/> I & I - Rainfall _____
<input type="checkbox"/> Roots _____
<input type="checkbox"/> Grease _____
<input type="checkbox"/> Debris _____
<input type="checkbox"/> Equipment Failure _____
<input type="checkbox"/> Construction _____
<input type="checkbox"/> Vandalism _____
<input type="checkbox"/> Power Failure _____
<input type="checkbox"/> Line Failure/Break _____
<input type="checkbox"/> Other - Describe _____ |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Volume: _____ *(Give an estimate in gallons)*

- Action Taken - Check all that apply**
(Short term and long-term action, including clean-up and any plans to remediate I & I)
- | | |
|------------------------------------------------------------------|-------------------------------------------------------|
| <input type="checkbox"/> Machine rodded | <input type="checkbox"/> Disinfected and Deodorized |
| <input type="checkbox"/> Jet-Vac | <input type="checkbox"/> Hydro Cleaned |
| <input type="checkbox"/> Hand rodded | <input type="checkbox"/> Spread Lime on Affected Area |
| <input type="checkbox"/> Used Generator To Power Pumps/Equipment | <input type="checkbox"/> Public Notification |
| <input type="checkbox"/> Other - Describe: _____ | |

- Environmental Damage:**
- | | |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| <input type="checkbox"/> OEHC - Observed or Evidence of Human Contact | <input type="checkbox"/> NEAH - No Evidence of Adverse Health/Environmental Impact |
| <input type="checkbox"/> OEEI - Observed or Evidence of Environmental Impact | <input type="checkbox"/> EFK - Evidence of Fish Kill |

Reported By _____ **Title** _____ **Telephone Number** _____

Sanitary Sewer Overflow (SSO) Monthly Report

Facility Name: _____ NPDES Permit No.: _____ Monitoring Period (Month/Year): ____/____

No Sanitary Sewer Overflows This Monitoring Period

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

Location	Manhole #	Start Date of SSO	End Date of SSO	Estimated Volume (in gallons)	Cause of SSO	Environmental Impact	Action (s) Taken to Address SSO	Discharge Location

Signature of Cognizant or Ranking Official

Date

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

APPENDIX 1

BUDGET PROCESS AND SCHEDULE



APPENDIX 2

MANHOLE INSPECTION FORM



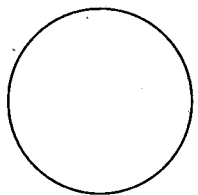


MANHOLE NUMBER: _____

DATE: _____ TIME: _____

CREW: _____

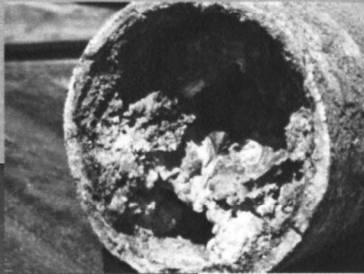
MANHOLE INSPECTION FORM

<u>UNIT TYPE</u> NON-STANDARD STANDARD (4ft) <hr/> <u>BARREL DIA (IN)</u> <hr/>	<u>LOCATION</u> ALLY CURB REST ALRW DRRW STRW CLST GUTT UTRW COMM RESI	<u>SURFACE COVER</u> ASPH CONC LAKE SOD BLDG CREE LNDS STRC BRSH DTCH MRSH WOOD BURD GRAV PAVED-DITCH	<u>PRECIPITATION</u> HEAVY RAIN LIGHT RAIN SNOW NONE
<u>COVER TYPE</u> STLN BOLT OTHR STPH STLB LWC	<u>COVER CONDITION</u> SOUND CRACKED BROKEN	<u>COVER /RIM FIT</u> POOR FAIR SEALED	<u>COVER DIAMETER</u> <hr/> <u># HOLES IN COVER</u> <hr/>
<u>FRAME CONITION</u> SOUND CRACKED BROKEN	<u>FRAME ADJUSTMENT</u> BLOCK NONE POURED BRICK OTHER PRECAST	<u>FRAME TO CORBEL SEAL</u> SOUND CRACKED NONE OFFSET DETERIORIATED	<u>EVIDENCE OF SURCH</u> YES NO
<u>STEP CONSTRUCTION</u> CONC CIRN RBRR NONE	<u>STEP CONDITION</u> SOUND LEAKING	<u>PONDING/SHEETING</u> PONDING SHEETING NONE	<u>CONE CONSTRUCTION</u> BRICK NONE CONC PCST GLAS UNKN
<u>CONE CONDITION</u> SOUND LEAKING DET CRACKED ROOTS MISSING BRICKS	<u>WALL CONSTRUCTION</u> BRCK CLAY GLAS NONE PCST CIRN CONC UNKN	<u>WALL CONDITION</u> SOUND INFILTRATION CRACKED ROOTS LEAKING JOINTS DET	<u>BENCH & CHANNEL CONSTRUCTION</u> BRCK CONC PCST GLAS
<u>BENCH & CHANNEL CONDITION</u> SOUND CRACKED INFILTRATION DET UNFINISHED ROOTS		<u>COMMENTS:</u> <hr/> <hr/> <hr/> <hr/> <hr/>	

APPENDIX 3

FOOD SERVICE BROCHURE EXAMPLE





Clean and healthy creeks, rivers, bays and lakes are very important to Russellville City Corporation. (FOG) Fats, Oils and grease from food service facilities such as restaurants can cause sewer line blockages that may result in sewage overflow into your facility and/or into storm drains. Water in storm drains is not treated before entering our waterways and should never contain trash, grease or other materials that you wouldn't dump into your lake. To help prevent pollution of your waterways follow these Best Kitchen Practices:

Allowing sewage to discharge to a gutter or storm drain may subject you to penalties and /or out-of-pocket costs to reimburse the city or public agency for clean-up-efforts.

Here are the pertinent codes, fines and agency contact information that apply.

Report Sewage Spills!

Russellville City Corporation
1-479-968-2105

Pope County Health Department
1-479-968-6004

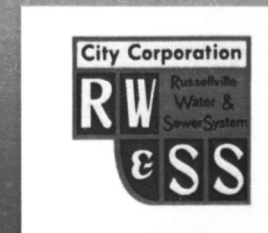
Code Enforcement
1-479-968-3232

Emergency Management
1-479-968-1800

Russellville City Corporation
P.O. Box 3186
Russellville, AR 72811
www.citycorporation.com

Help Prevent Pollution:

Tips for the Food Service Industry



Best Kitchen Practices

Disposal of Grease & Oil

- Use grease storage containers or install a grease trap to contain your grease. Never put oil or grease down the drain.
- Never overfill your grease storage container or transport it without a cover.
- Grease control devices must be emptied and cleaned by permitted companies.
- Keep maintenance records on site.

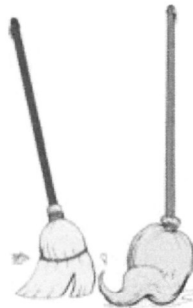
Disposal of Food Waste

- Scrape food waste off of plates, utensils, pots, food preparation and cooking areas and dispose of it in the trash.
- Food scraps often contain grease, which can clog sewer pipes and result in sewage backups and overflows. Never put food waste down the drain.



Minor Spill Cleanup

- Always use dry cleanup methods, such as a rag, damp mop or broom.
- Never wash a spill into the street, gutter or storm drain.

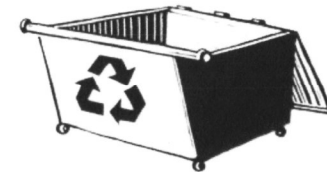


Major Spill Cleanup

- Immediately contain and clean the spill using dry methods.
- Have spill containment and cleanup kits readily available, and train all employees on how to use them.

Dumpster Cleanup

- Always pick up loose debris around dumpster
- Always keep the lid closed
- Never pour liquids into the dumpster or hose it out.



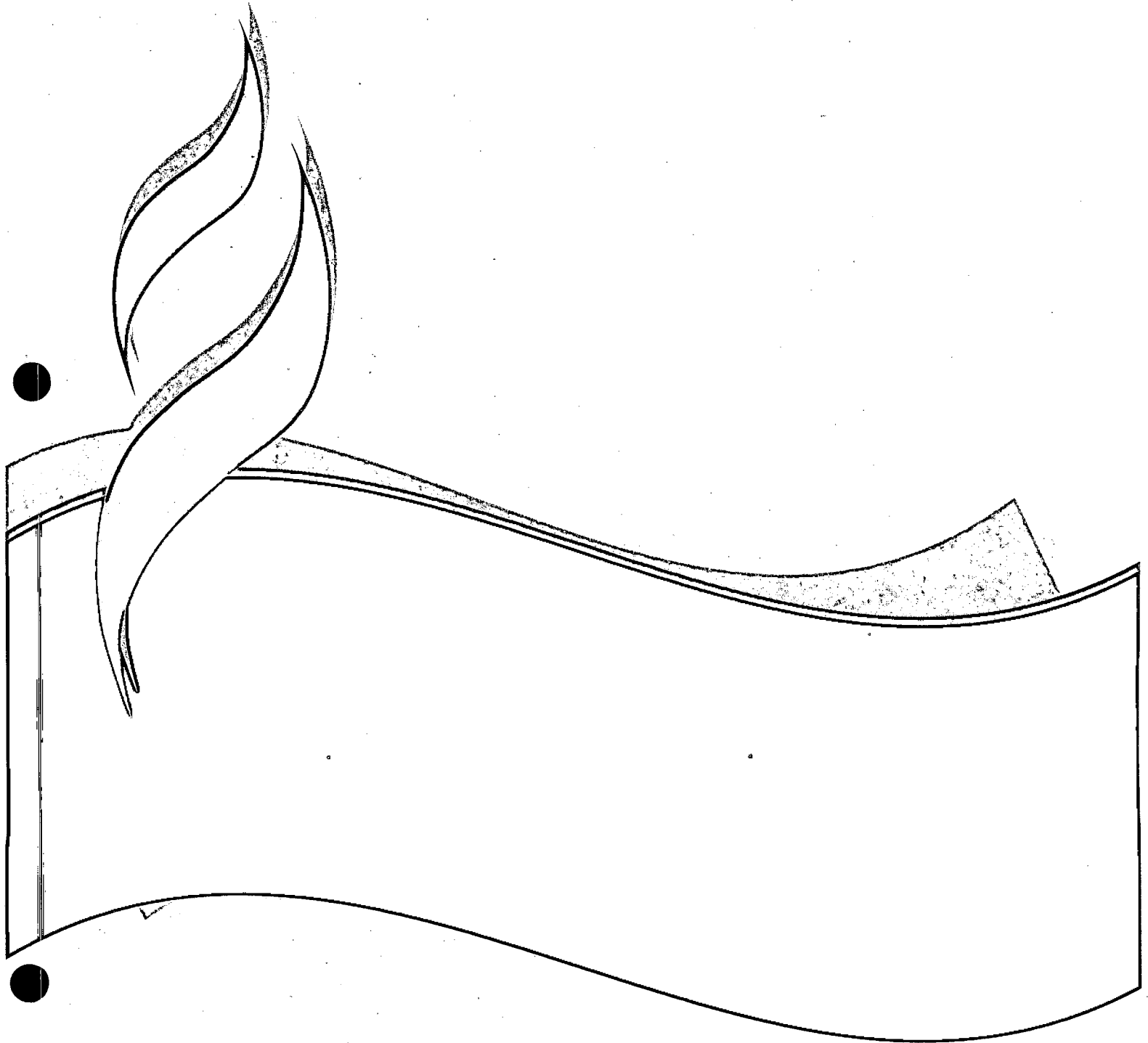
Cleaning the Floor Mat

- When sweeping the floor mats, always discard the debris into the trash.
- Never hose off the mats in an area where the wastewater can flow to the street, gutter or storm drain.
- Dispose of wash water in an area with a floor drain.



APPENDIX 4

SEWAGE SPILL BROCHURE EXAMPLE



Sewage Spill Regulatory Requirements

Allowing sewage to discharge to a gutter or storm drain may subject you to penalties and /or out-of- pocket costs to reimburse the city or public agency for clean-up-efforts.

Here are the pertinent codes, fines and agency contact information that apply.

Report Sewage Spills!

Russellville City Corporation
1-479-968-2105

City Health Department
1-479-968-6004

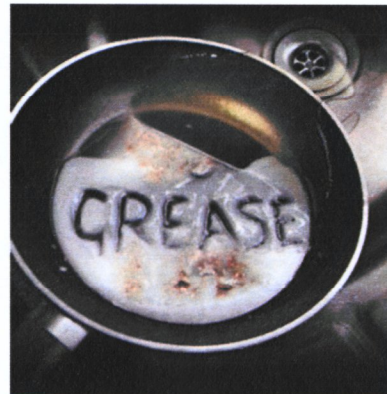
Code Enforcement
1-479-968-3232

Emergency Management
1-479-968-1800

If You See a Sewage Spill occurring, Notify Your City Sewer/Public Works Department or Public Sewer District IMMEDIATELY!

How You Can Prevent Sewage Spills

1. Never put grease down garbage disposals, drains or toilets.
2. Perform periodic cleaning to eliminate grease, debris and roots in your service laterals.
3. Repair any structural problems in your sewer system and eliminate any rainwater infiltration/inflow leaks into your service laterals.



Russellville City Corporation

P.O. Box 3186
Russellville, AR 72811
www.citycorporation.com

Sewage Spill

Reference Guide

Your Responsibilities as a Private Property Owner



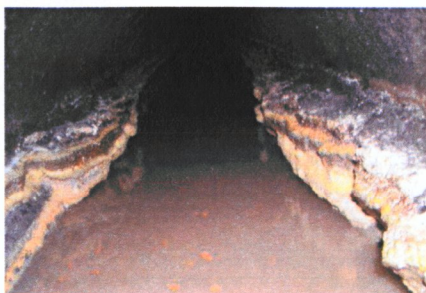
Russellville City Corporation

479-968-2105

Sewage Spill

What is a sewage spill?

Sewage spills occur when the wastewater being transported via underground pipes overflows through a manhole, cleanout or broken pipe. Sewage spills can cause health hazards, damage to homes and businesses, and threaten the environment, local waterways, and lakes.



Common Causes of Sewage Spills

Grease builds up inside and eventually blocks sewer pipes. Grease get into the sewer from food establishments, household drains, as well as from poorly maintained commercial traps and interceptors.

Structure problems caused by tree roots in the lines, broken/cracked pipes, missing or broken cleanout caps or undersized sewers can cause blockages.

Infiltration and Inflow (I/I) impacts pipe capacity and is caused when groundwater or rainwater enters the sewer system through pipe defects and illegal connections.

You Could Be Liable

Allowing sewage from your home, business or property to discharge to a gutter or storm drain may subject you to penalties and /or out of pocket cost to reimburse the city or public agency for clean-up and enforcement efforts.

What to Look For

Sewage Spills can be a very noticeable gushing of water from a manhole or a slow water leak that may take time to be noticed. Don't dismiss unaccounted for wet areas. Look for:

- Drain backups inside the buildings
- Wet ground and water leaking around manhole lids onto your street
- Leaking water from cleanouts or outside drains
- Unusual odorous wet areas: sidewalks, external walls or ground/landscape around a building



Keep people and pets away from the affected area. Untreated sewage has high levels of disease-causing viruses and bacteria. Call your local health care agency listed on the back for more information.

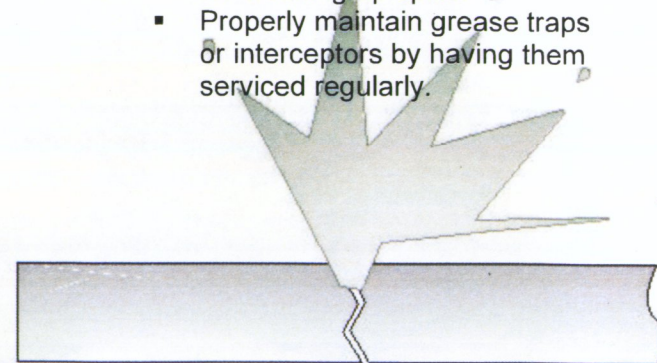
Preventing Grease Blockages

The drain is not a dump! Recycle or dispose of grease properly and never pour grease down the drain.

Homeowners should mix fats, oils and grease with absorbent waste materials such as paper, coffee grounds, or kitty litter and place it in the trash. Wipe food scraps from plates and pans and dump them in the trash.

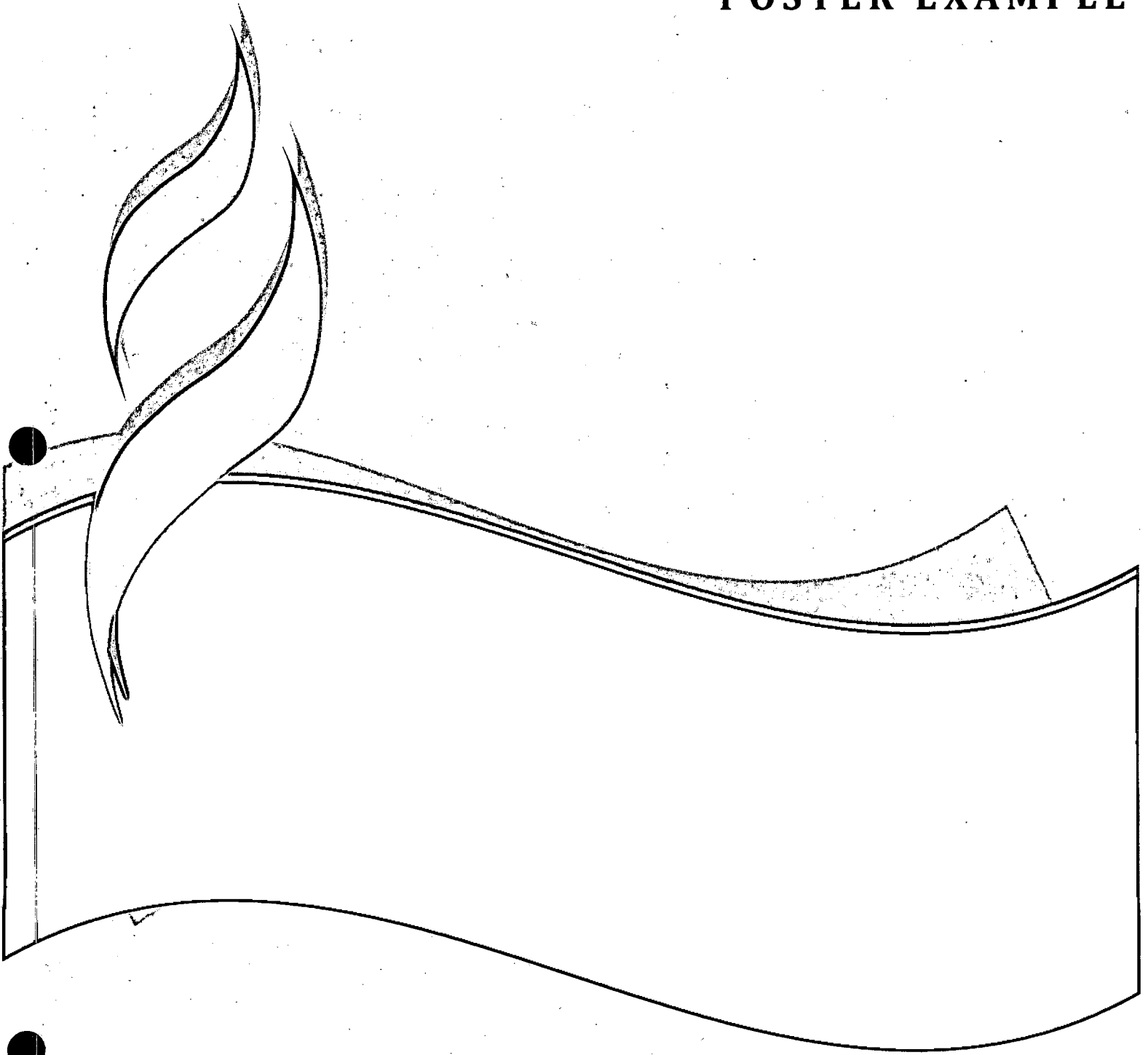
Restaurants and commercial food service establishments should always use "Kitchen Best Management Practices: These include:

- Collecting all cooking grease and liquid oil from pots, pans and fryers in covered grease containers for recycling.
- Scraping or dry-wiping excess food and grease from dishes, pots, pans and fryers into the trash.
- Installing drain screens on all kitchen drains.
- Having spill kits readily available for cleaning up spills.
- Properly maintain grease traps or interceptors by having them serviced regularly.

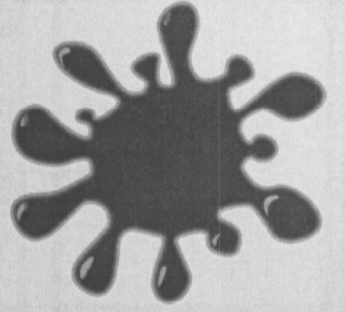


APPENDIX 5

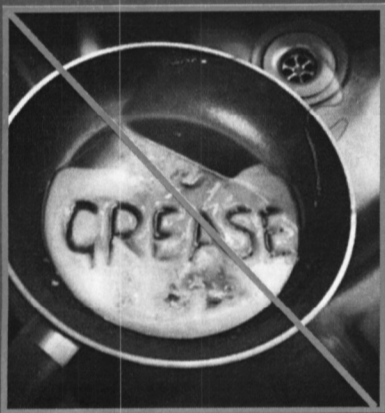
POSTER EXAMPLE



Let's Tackle the Grease in This Kitchen!



X THE WRONG WAY La Forma Incorrecta



- 1** Do not pour cooking residue directly into the drain.
No vierta residuos de cocinar directamente en el desagüe.

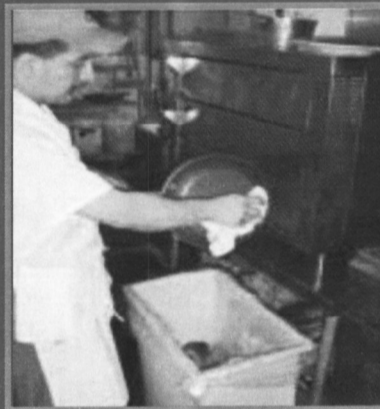


- 2** Do not dispose of food waste into the garbage disposal.
No ponga desperdicios de comida en el triturador de comida.



- 3** Do not pour waste oil directly into the drain.
No ponga desperdicio de aceite directamente en el desagüe.

✓ THE RIGHT WAY La Forma Correcta



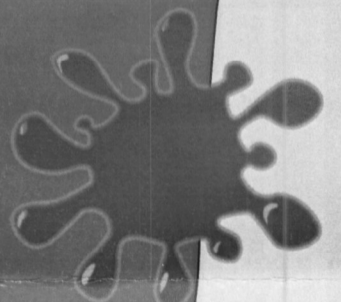
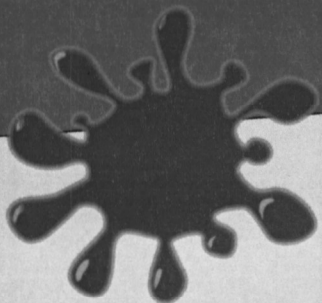
- 1** Wipe pots, pans, and work areas prior to washing.
Limpie con una toallita las ollas, cazuelas, y areas de trabajo antes de lavarlos.



- 2** Dispose of food waste directly into trash.
Deseche los desperdicios de comida en el bote de basura.



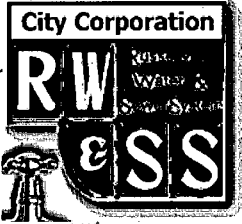
- 3** Collect waste oil and store for recycling.
Junte el desperdicio de aceite y guardelo para que sea reciclado.



APPENDIX 6

AERIAL STREAM CROSSING INSPECTION FORM





DATE: _____

NAME: _____

SEWER STREAM CROSSING INSPECTION

Evaluation of stream shall include stabilization of stream banks, bed, pipe supports, encasements, erosion, etc.

Upstream Manhole: _____

Downstream Manhole: _____

Stream Name: _____

Approx. LF from specified Manhole: _____

Crossing Condition

- Excellent
- Good
- Fair
- Poor (Alert Maintenance)

Comments:

Type of Crossing

- Aerial
- Exposed
- Below Creek Level
- Encased

Comments:

Debris

- None
- Light
- Medium
- Heavy (Alert Maintenance)

Comments:

*ATTACH PHOTO

APPENDIX 7

SEWER & WATER RATE FLYER





CITY CORPORATION

WATER & SEWER RATES

Monthly Water Meter Charge

Each customer shall pay a monthly charge based on the size of the customer's water meter, as follows:

5/8" Meter	\$8.69	3" Meter	\$49.20
1" Meter	\$12.03	4" Meter	\$157.48
1 1/2" Meter	\$22.86	6" Meter	\$194.26
2" Meter	\$29.99		

Monthly Charge for a meter larger than 6" will be based on the actual cost.

RESIDENTIAL, COMMERCIAL, INDUSTRIAL & PUBLIC AUTHORITY OUTSIDE CITY LIMITS ARE 1 1/2 TIMES FOR METER CHARGES.

Additional Charge for Water Usage

In addition to the monthly meter charge, each customer shall be required to pay for water usage in accordance with the following schedule:

RESIDENTIAL		COMMERCIAL	\$1.78 Per 1,000 Gallons
Inside City Limits	\$1.71/1,000 For First 2,000 Gallons	INDUSTRIAL	\$1.49 Per 1,000 Gallons
	\$1.94/1,000 Over 2,000 Gallons	PUBLIC AUTHORITY	\$1.99 Per 1,000 Gallons
Outside City Limits	\$3.52/1,000 For First 2,000 Gallons	MUNICIPAL	\$1.53 Per 1,000 Gallons
	\$3.90/1,000 Over 2,000 Gallons	WHOLESALE	\$1.14 Per 1,000 Gallons

Private Fire Protection (Fire Hydrants and Sprinkler Services)

Size of Service Connection	Net Annual Rates
6"	\$378.68
8"	\$674.21
10"	\$1052.52

COMMERCIAL, INDUSTRIAL, PUBLIC AUTHORITY & PRIVATE FIRE outside the City Limits of Russellville shall be charged 1 1/2 times the normal charges for water usage.

Surcharge for Customers Within City Limits

In addition to the monthly meter charge and the additional charge for water usage, each customer whose premises are located within the corporate limits of the City is required to pay a charge equal to 4 1/2% of the monthly charge for the meter and the additional charge for water usage, which is a fee City Corporation pays to the City of Russellville, somewhat like a franchise fee for the use of City rights-of-way and their maintenance.

Taxes & Fees

Arkansas State Sales Tax 6%, City of Russellville 1 1/2%, and Pope County Tax 1%.

Returned Checks \$25.00, Late Fee \$10.00, Collection Fee \$10.00, Connection Fee \$7.50, Service Calls (Re-reads, Turn-offs due to broken pipes, leak checks, pressure checks, etc.) \$7.50, Meter Tests \$20.00 - \$50.00 (5/8" - 2" meter)

Sewer Service Charge

Monthly residential sewer service charge is computed on the average water used in the month of January, February, and March of each year. In general, these are the months when residential customers use the least amount of water and when water issued is going into sanitary sewer for treatment.

Charges for new domestic users will be based on the water consumption of a typical user of the same or similar class until a water use history is established and the average computed. Charges for all other classes of customers (commercial, industrial, etc.) are based on the same rate but are computed each month according to the amount of water used.

Charges for all classes of customers who are located outside the City Limits of Russellville are computed at 1 1/2 the normal rate.

Charges are computed in compliance with city ordinances and rates as follows:

First 1,000 Gallons Per Month	\$6.67 Per Month
Next 19,000 Gallons Per Month	\$2.59 Per 1,000 Gallons
Over 20,000 Gallons Per month	\$2.20 Per 1,000 Gallons

There will be an additional monthly charge of \$5.00 to those customers who require a grinder pump. This charge is in addition to the initial purchase price of the grinder pump and normal installation cost.



CITY CORPORATION

Office Location

205 West 3rd Place
Russellville, AR 72801
Phone: (479)968-2105
Fax: (479)968-3265

Mailing Address

City Corporation
PO Box 3186
Russellville, AR 72811-3186

Office Hours

Lobby: 8:00 am – 4:30 pm
Extended Hours: 4:30 pm – 6:00 pm
*Drive Thru Payments & Telephone Service Only
Monday – Friday
Closed Holidays

Monthly Bills

Bills for service will be rendered monthly and are due in 20 days from the mailing of the invoice. The term "monthly" for billing purposes will mean the period between any two consecutive readings of the meters by City Corporation, such readings to be taken as nearly as practicable every 30 days. When City Corporation is unable to read a meter after reasonable effort, the customer will be billed on an estimated consumption based on the best available information.

Failure to receive bills in no way exempts a customer from payment of those bills.

Bills may be paid through the mail, through our website (www.citycorporation.com), or at the City Corporation Business Office located at 205 W 3rd Pl. For proper credit, always include the bottom portion of the bill with the payment. To aid in the processing of the payment and to insure proper credit, please write the account number on the check.

Delinquent Accounts

All City Corporation bills are due upon receipt. A bill becomes delinquent 20 days from the mail date. When the bill becomes delinquent, there is a \$10.00 late fee billed on the next invoice. If payment of delinquent bill is not satisfied and City Corporation is forced to disconnect services, there will be a \$10.00 shut-off processing fee and security deposit required to restore services. In the case of delinquency, we mail out shut-off notices and attempt to contact using an automated dialer; therefore, it is important that the customer supply City Corporation with an updated phone number for the account. The phone number is used in the case of delinquency or for any other billing problems on the account.

Obtaining Service

In order to obtain service where the facilities are already in place, contact City Corporation to arrange turn-ons and installation of meters. It is the policy of City Corporation to turn water service on only when someone is present or a verbal liability release has been given because of the potential for water damage due to damaged pipes or fixtures. As a matter of policy, City Corporation employees **DO NOT** enter the customer's home.

Customers are required to produce identification (such as Driver's License or State issued Identification Cards), Social Security Number, Rental/Lease Agreement or Settlement Statement (Title Papers, Acceptance Papers, etc.) if purchasing home, and a mailing address and telephone number so we can contact you when necessary. All customer billing information and records remain confidential and are encrypted for security.

Deposits**Rules and Regulations Regarding Deposits**

City Corporation has the right to require a deposit equal to two and one-half (2 ½) times the average monthly bill for service rendered. City Corporation will refund said deposit on notice to disconnect service and after payment in full has been made for all service rendered. City Corporation will forward any deposit balance due customer to the forwarding address furnished by the customer. If this deposit balance is not deliverable because of the customer's failure to provide the Utility with a proper forwarding address, a second attempt will be made to refund the deposit. If the second attempt to forward this balance fails, then the deposit balance in the account will be assessed a \$25.00 service charge. Twenty-five dollars will also be charged each time this process is repeated until the deposit is eliminated.

City Corporation may require a deposit from any existing customer:

- a. Who's service has been discontinued for non-payment of a delinquent account
- b. Who has given two (2) invalid checks in the past twelve (12) months
- c. Who has failed to pay his bill by the due date twice within the past twelve (12) months
- d. Who has misrepresented his identity for the purpose of obtaining service
- e. Who has turned his water on again after it has been turned off for any violation of rules, installed a jumper pipe to obtain service without having paid a deposit for service or failed to pay his delinquent bill

Deposit Refund

The deposit made by a customer may be refunded even though the customer remains a customer of City Corporation, provided that the customer has: 1) a five year historical record of prompt payment; 2) not violated any of City Corporation's rules and regulations. City Corporation shall have no obligation to pay interest on said deposit during the time it is held by City Corporation pursuant to the deposit agreement. The deposit refund will appear as a credit on the bill.

Deposits Unnecessary

There shall be no deposit necessary for any current customer in good standing merely because of a change of service address within the service area of City Corporation.

Helpful Hints on Finding a Leak

The most common water leak is the dripping faucet or toilet leak. To make a test, turn off all faucets and other water outlets. Find your water meter and keep watch on the leak detector (small red dial) and sweep hand on the face of the meter for ten to fifteen minutes. If the hand continues to move, then there is a leak. The size of the leak can be measured by timing the hand to see how long it takes to waste a given quantity. Dumping some laundry bluing into the tank of a toilet after it has filled and become quiet can make a quick check for a toilet leak. If the bluing appears in the bowl before flushing, a leak is present.

NO INFORMATION REMOVED

APPENDIX 8

NPDES PERMIT



Permit Number: AR0021768
AFIN: 58-00105

**AUTHORIZATION TO DISCHARGE WASTEWATER UNDER
THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM AND
THE ARKANSAS WATER AND AIR POLLUTION CONTROL ACT**

In accordance with the provisions of the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et seq.), and the Clean Water Act (33 U.S.C. § 1251 et seq.),

The applicant's mailing address is:

City Corporation - Russellville Water and Sewer System
P.O. Box 3186
Russellville, AR 72811

The facility address is:

City Corporation - Russellville Water and Sewer System
404 Jimmy Lile Road
Russellville, AR 72802

is authorized to discharge treated municipal wastewater from a facility located as follows: south of the city of Russellville; two miles south of Highway 64 in Pope County, Arkansas.

Latitude: 35° 14' 56"; Longitude: 93° 06' 58"

to receiving waters named:

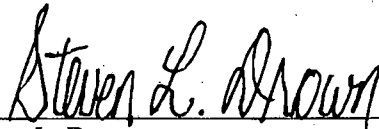
Whig Creek thence to the Arkansas River in Segment 3F of the Arkansas River Basin.

The outfall is located at the following coordinates:

Outfall 001: Latitude: 35° 14' 50"; Longitude: 93° 06' 45"

Discharge shall be in accordance with effluent limitations, monitoring requirements, and other conditions set forth in this permit. Per Part III.D.10, the permittee must re-apply on or before 180 days prior to expiration date for permit coverage past the expiration date.

Issue Date: September 30, 2010
Effective Date: October 1, 2010
Expiration Date: September 30, 2015



Steven L. Brown
Chief, Water Division
Arkansas Department of Environmental Quality

**PART I
 PERMIT REQUIREMENTS**

SECTION A. INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 - treated municipal wastewater.

During the period beginning on the effective date and lasting 36 months after the effective date, the permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below from a treatment system consisting of three (3) aerated flow equalization basins, bar screens, grit removal, three (3) primary clarifiers, two (2) biotowers, one (1) intermediate clarifier, two (2) trickling rock filters, extended aeration activated sludge, two (2) final clarifiers, and two (2) chlorine contact basins with a design flow of 7.3 MGD.

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
		Monthly Avg.	Monthly Avg.		
Flow	N/A	Report, MGD	Report, MGD (Daily Maximum)	once/day	totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)					
(May-Oct)	608.8	10.0	15.0	once/weekday	composite
(Nov-Apr)	913.2	15.0	22.5	once/weekday	composite
Total Suspended Solids (TSS)					
(May-Oct)	913.2	15.0	22.5	once/weekday	composite
(Nov-Apr)	1217.6	20.0	30.0	once/weekday	composite
Ammonia Nitrogen (NH3-N)					
(Apr-Oct)	133.9	2.2	5.6	once/weekday	composite
(Nov-March)	243.5	4.0	6.0	once/weekday	composite
Dissolved Oxygen (DO)	N/A	6.0, (Inst. Min.)		once/weekday	grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
	N/A	1000	2000	once/weekday	grab
Total Residual Chlorine (TRC) ¹	N/A	<0.1 mg/l (Inst. Max.)		once/weekday	grab
Total Phosphorus (TP)	Report	Report	Report	once/month	grab
Nitrates (NO3-N)	542.0	10.0	15.0	once/weekday	composite
Zinc, Total Recoverable ³	5.2	85.5 µg/l	171.6 µg/l	once/month	composite
Copper, Total Recoverable ³	0.45	9.2 µg/l	18.5 µg/l	once/month	composite
Mercury, Total Recoverable ³	Report	Report µg/l	Report µg/l	once/month	composite
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/weekday	grab
Chronic WET Testing ²	N/A	Report		once/quarter	composite

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
		Monthly Avg.	Monthly Avg.		
<u>Pimephales promelas (Chronic)²</u> Pass/Fail Lethality (7-day NOEC) TLP6C Pass/Fail Growth (7-day NOEC) TGP6C Survival (7-day NOEC) TOP6C Coefficient of Variation (Growth) TQP6C Growth (7-day NOEC) TPP6C		<u>7-Day Average</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report %		once/quarter once/quarter once/quarter once/quarter once/quarter	composite composite composite composite composite
<u>Ceriodaphnia dubia (Chronic)²</u> Pass/Fail Lethality (7-day NOEC) TLP3B Pass/Fail production (7-day NOEC) TGP3B Survival (7-day NOEC) TOP3B Coefficient of Variation (Reproduction) TQP3B Reproduction (7-day NOEC) TPP3B		<u>7-Day Average</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report %		once/quarter once/quarter once/quarter once/quarter once/quarter	composite composite composite composite composite

- 1 See Condition No. 11 of Part II. (TRC Condition)
- 2 See Condition No. 12 of Part II. (WET Testing Condition)
- 3 See Condition No. 10 of Part II. (Metals Condition)

There shall be no discharge of distinctly visible solids, scum, or foam of a persistent nature, nor shall there be any formation of slime, bottom deposits, or sludge banks. There shall be no visible sheen as defined in Part IV of this permit.

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. Samples shall be taken after final treatment at the effluent weir.

All and each unauthorized Sanitary Sewer Overflow (SSO) must be reported to ADEQ. See Condition No. 5 of Part II.

**PART I
 PERMIT REQUIREMENTS**

SECTION B. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 - treated municipal wastewater.

During the period beginning 36 months after the effective date and lasting until the date of expiration, the permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below from a treatment system consisting of three (3) aerated flow equalization basins, bar screens, grit removal, three (3) primary clarifiers, two (2) biotowers, one (1) intermediate clarifier, two (2) trickling rock filters, extended aeration activated sludge, two (2) final clarifiers, and two (2) chlorine contact basins with a design flow of 7.3 MGD.

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
		Monthly Avg.	Monthly Avg.		
Flow	N/A	Report, MGD	Report, MGD (Daily Maximum)	once/day	totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)					
(May-Oct)	608.8	10.0	15.0	once/weekday	composite
(Nov-Apr)	913.2	15.0	22.5	once/weekday	composite
Total Suspended Solids (TSS)					
(May-Oct)	913.2	15.0	22.5	once/weekday	composite
(Nov-Apr)	1217.6	20.0	30.0	once/weekday	composite
Ammonia Nitrogen (NH3-N)					
(Apr-Oct)	133.9	2.2	5.6	once/weekday	composite
(Nov-March)	243.5	4.0	6.0	once/weekday	composite
Dissolved Oxygen (DO)	N/A	6.0, (Inst. Min.)		once/weekday	grab
Fecal Coliform Bacteria (FCB)		(colonies/100ml)			
	N/A	1000	2000	once/weekday	grab
Total Residual Chlorine (TRC) ¹	N/A	<0.1 mg/l (Inst. Max.)		once/weekday	grab
Total Phosphorus (TP)	Report	Report	Report	once/month	grab
Nitrates (NO3-N)	542.0	10.0	15.0	once/weekday	composite
Zinc, Total Recoverable ³	5.2	85.5 µg/l	171.6 µg/l	once/month	composite
Copper, Total Recoverable ³	0.45	9.2 µg/l	18.5 µg/l	once/month	composite
Mercury, Total Recoverable ³	0.00082	0.0134 µg/l	0.0269 µg/l	once/month	composite
pH	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	once/weekday	grab
Chronic WET Testing ²	N/A	Report		once/quarter	composite

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
		Monthly Avg.	Monthly Avg.		
<u>Pimephales promelas (Chronic)²</u> Pass/Fail Lethality (7-day NOEC) TLP6C Pass/Fail Growth (7-day NOEC) TGP6C Survival (7-day NOEC) TOP6C Coefficient of Variation (Growth) TQP6C Growth (7-day NOEC) TPP6C		<u>7-Day Average</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report %		once/quarter once/quarter once/quarter once/quarter once/quarter	composite composite composite composite composite
<u>Ceriodaphnia dubia (Chronic)²</u> Pass/Fail Lethality (7-day NOEC) TLP3B Pass/Fail production (7-day NOEC) TGP3B Survival (7-day NOEC) TOP3B Coefficient of Variation (Reproduction) TQP3B Reproduction (7-day NOEC) TPP3B		<u>7-Day Average</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report %		once/quarter once/quarter once/quarter once/quarter once/quarter	composite composite composite composite composite

- 1 See Condition No. 11 of Part II. (TRC Condition)
- 2 See Condition No. 12 of Part II. (WET Testing Condition)
- 3 See Condition No. 10 of Part II. (Metals Condition)

There shall be no discharge of distinctly visible solids, scum, or foam of a persistent nature, nor shall there be any formation of slime, bottom deposits, or sludge banks. There shall be no visible sheen as defined in Part IV of this permit.

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. Samples shall be taken after final treatment at the effluent weir.

All and each unauthorized Sanitary Sewer Overflow (SSO) must be reported to ADEQ. See Condition No. 5 of Part II.

SECTION B. PERMIT COMPLIANCE

The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

Compliance is required on the effective date of the permit for all parameters except for Mercury. Final limits for Mercury become effective three (3) years after the effective date of the permit.

The permittee shall submit progress reports addressing the progress towards attaining the final effluent limits for Mercury according to the following schedule:

<u>ACTIVITY</u>	<u>DUE DATE</u>
Progress Report	One (1) year after effective date
Progress Report	Two (2) years after effective date

The permittee has the option to undertake any study deemed necessary to meet the final limitations during the interim period. Any additional treatment must be approved and construction approval granted prior to final installation.

PART II OTHER CONDITIONS

1. The operator of this wastewater treatment facility shall be licensed as Class IV by the State of Arkansas in accordance with APCEC Regulation No. 3.
2. For publicly owned treatment works, the 30-day average percent removal for Carbonaceous Biochemical Oxygen Demand (CBOD5) and Total Suspended Solids shall not be less than 85 percent unless otherwise authorized by the permitting authority in accordance with 40 CFR Part 133.102, as adopted by reference in APCEC Regulation No. 6.
3. In accordance with 40 CFR Parts 122.62 (a)(2) and 124.5, this permit may be reopened for modification or revocation and/or reissuance to require additional monitoring and/or effluent limitations when new information is received that actual or potential exceedance of State water quality criteria and/or narrative criteria are determined to be the result of the permittee's discharge(s) to a relevant water body or a Total Maximum Daily Load (TMDL) is established or revised for the water body that was not available at the time of the permit issuance that would have justified the application of different permit conditions at the time of permit issuance.
4. Other Specified Monitoring Requirements

The permittee may use alternative appropriate monitoring methods and analytical instruments other than as specified in Part I Section A of the permit without a major permit modification under the following conditions:

- The monitoring and analytical instruments are consistent with accepted scientific practices;
- The requests shall be submitted in writing to the Permits Section of the Water Division of the ADEQ for use of the alternate method or instrument.
- The method and/or instrument is in compliance with 40 CFR Part 136 or acceptable to the Director; and
- All associated devices are installed, calibrated, and maintained to insure the accuracy of the measurements and are consistent with the accepted capability of that type of device. The calibration and maintenance shall be performed as part of the permittee's laboratory Quality Control/Quality Assurance program.

Upon written approval of the alternative monitoring method and/or analytical instruments, these methods or instruments must be consistently utilized throughout the monitoring period. ADEQ must be notified in writing and the permittee must receive written approval from ADEQ if the permittee decides to return to the original permit monitoring requirements.

5. Sanitary Sewer Overflow (SSO):

A. An overflow is any spill, release or diversion of sewage from a sanitary sewer collection system, including:

1. An overflow that results in a discharge to waters of the state; and
2. An overflow of wastewater, including a wastewater backup into a building (other than a backup caused solely by a blockage or other malfunction in a privately owned sewer or building lateral), even if that overflow does not reach waters of the state.

B. Immediate Reporting

All overflows shall be reported to the Enforcement Branch of the Water Division by telephone (501-682-0638), facsimile (501-682-0910), or by using the Department web site at waterenfssso@adeq.state.ar.us within 24 hours from the time the permittee becomes aware of the circumstance.

At a minimum the report shall identify:

1. The location(s) of overflow;
2. The receiving water (If there is one);
3. The duration of overflow;
4. Cause of overflow; and
5. The estimated volume of overflow (MG).

C. Discharge Monitoring Reports (DMRs)

The permittee shall report every month all overflows with the Discharge Monitoring Report (DMR) submittal. These reports shall be summarized and reported in tabular format with the minimum following information. The permittee may use the ADEQ Forms which may be obtained from the following web sites:

http://www.adeq.state.ar.us/water/branch_permits/pdfs_forms/sso_tabular_report.pdf
or http://www.adeq.state.ar.us/water/branch_enforcement/forms/sso_report.asp

1. The location(s) of overflow;
2. The receiving water (If there is one);
3. The duration of overflow;
4. Cause of overflow;
5. The estimated volume of overflow (MG);
6. A description of the sewer system component from which the release occurred (e.g., manhole, constructed overflow pipe, crack in pipe);
7. The estimated date and time when the overflow began and stopped or will be stopped;
8. The cause or suspected cause of the overflow;
9. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;

10. If reasonably made, an estimate of the number of persons who came into contact with wastewater from the overflow; and
11. Steps taken or planned to mitigate the impact(s) of the overflow and a schedule of major milestones for those steps.
6. Best Management Practices (BMPs) are activities, practices, maintenance procedures, and other management practices designed to prevent or reduce the pollution of waters of the State. BMPs also include treatment technologies, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw sewage. BMPs may include structural devices or nonstructural practices.

7. Biosolids practices.

The biosolids produced at the treatment plant is aerobically digested and land applied on permitted sites.

8. Approval to land apply biosolids under this permit is limited to a maximum of one (1) year after this permit's effective date. A separate permit must be obtained within this time period or land application of biosolids must cease. Reporting requirements of this permit continue for the term of this permit unless they are superseded by similar conditions in one or more separate land application permits.

9. Biosolids Land Application Conditions

A. The waste disposal system shall be operated in accordance with the Waste Management Plan (WMP) approved by the Department.

B. Plant Available Nitrogen (PAN) shall not be applied at a rate exceeding the annual nitrogen uptake of the crop or allowed to exceed the site specific rate approved by the Department. The PAN shall be calculated using the following equations:

$$\text{Surface applied waste: PAN} = 0.3(\text{TKN} - \text{NH}_3) + 0.5\text{NH}_3 + \text{NO}_3 + \text{NO}_2$$

$$\text{Incorporated waste: PAN} = 0.3(\text{TKN} - \text{NH}_3) + \text{NH}_3 + \text{NO}_3 + \text{NO}_2$$

C. Land application sites are as follows:

Name	Field ID	Section	Township	Range	Acreage	Latitude	Longitude
City Corp	1	22	7 North	20 West	49	35° 14' 36" N	93° 6' 39" W
Baker	2	21	7 North	20 West	67.5	35° 14' 35" N	93° 7' 25" W
Old Pope County Landfill	3	21	7 North	20 West	76	35° 14' 44" N	93° 7' 40" W

D. The biosolids generator must issue a signed certification stating that the Pathogen Reduction, Vector Attraction Reduction, and Pollutant Concentration Limits have been met. The State requirements on Pathogen Reduction, Vector Attraction Reduction, and

Pollutant Concentration Limits are the same as those listed in 40 CFR Part 503. All the above information must be made available to the land-applicator before the biosolids materials are delivered. Concurrently, a signed copy of each certification must be also submitted to the ADEQ Water Division.

- E. Biosolids can only be stored in accordance with the permit and the approved waste management plan, if provisions are made in the plan for that purpose. The utilization of improvised field storage sites or any other site not approved by the Department is prohibited.
- F. Transportation of the biosolids must be such that will prevent the attraction, harborage or breeding of insects or rodents. It must not produce conditions harmful to public health, the environment, odors, unsightliness, nuisances, or safety hazards.
- G. The containers used for the transportation of the biosolids must be of the closed type. Transportation equipment must be leak-proof and kept in sanitary condition at all times. Biosolids must be enclosed or covered as to prevent littering, vector attraction, or any other nuisances.
- H. The permittee shall be responsible for assuring that the landowner, and the waste applicator (if different from the permittee) abide by the conditions of this permit.
- I. Waste shall be land applied by subsoil injection to a depth of 6 - 8 inches or surface applied. Surface applied waste must be evenly distributed over the entire application area.
- J. Waste shall not be applied to slopes with a gradient greater than 12%; or to soils that are saturated, frozen or covered with snow, and during rain or when precipitation is imminent, meaning a substantial natural occurrence of precipitation that could cause significant damage to property or threaten human life in the near future.
- K. Disposal of waste in a flood plain shall not restrict the flow of the base flood, reduce the temporary storage capacity of the flood plain, or result in a washout of solid waste, so as to pose a hazard to human life, wildlife or land and water uses.
- L. Waste shall not be spread within; 50 feet of property lines and rock outcrops; 100 feet of lakes, ponds, springs, wetlands, streams, and sinkholes; 200 feet of drinking water wells; 300 feet of occupied buildings or bodies of water classified as an "extraordinary resource body of water."
- M. The soil pH of the sludge application sites must be adjusted with lime in accordance with the University of Arkansas Cooperative Extension Service. Representative soil samples must be taken in accordance with Condition Number 14. If the resulting pH is 5.7 or lower, lime must be applied in accordance with the soil test recommendations. Soil pH is to be monitored in an annual basis and adjusted, if necessary, to the above requirements.

N. The permittee is responsible for the biosolids analyses, soil analyses, and reporting schedule in accordance with the requirements in the following tables.

TABLE I				
Waste Analysis, Reporting, and Record Keeping				
Parameter	Ceiling Concentrations (mg/kg)	Cumulative Pollutant Loading Rate (lb/ac)	Monitoring Frequency	Reporting
Arsenic	75	37	Quarterly	Annually by May 1
Cadmium	85	35	Quarterly	Annually by May 1
Copper	4300	1350	Quarterly	Annually by May 1
Lead	840	270	Quarterly	Annually by May 1
Mercury	57	15	Quarterly	Annually by May 1
Molybdenum	75	Report	Quarterly	Annually by May 1
Nickel	420	378	Quarterly	Annually by May 1
Selenium	100	90	Quarterly	Annually by May 1
Zinc	7500	2520	Quarterly	Annually by May 1
Chromium	Report	Report	Quarterly	Annually by May 1
Polychlorinated Biphenyls (PCB's)	50	N/A	Quarterly	Annually by May 1

TABLE II				
Waste Analysis, Reporting, and Record Keeping				
Parameter	Maximum Limit	Reporting Units	Monitoring Frequency	Reporting
Total Solids	Report	Percentage (%)	Quarterly	Annually by May 1
Nitrate Nitrogen	Report	mg/kg	Quarterly	Annually by May 1
Nitrite Nitrogen	Report	mg/kg	Quarterly	Annually by May 1
Ammonia Nitrogen	Report	mg/kg	Quarterly	Annually by May 1
Total Kjeldahl Nitrogen	Report	mg/kg	Quarterly	Annually by May 1
Total Phosphorus	Report	mg/kg	Quarterly	Annually by May 1
Total Potassium	Report	mg/kg	Quarterly	Annually by May 1
Total Volume Applied	Report	Gallons	Each land application event	Annually by May 1
Application Rate	Nitrogen Uptake of Cover Crop	lb/ac	Prior to land application	Maintain for records

TABLE III			
Soils			
Parameter	Reporting Units	Monitoring Frequency	Reporting
Conductivity	µmhos/cm	Prior to application	Annually by May 1
Cation Exchange Capacity	meq/100g	Prior to application	Annually by May 1
Nitrate-Nitrogen	mg/kg	Prior to application	Annually by May 1
Phosphorus	mg/kg	Prior to application	Annually by May 1
pH	S.U.	Prior to application	Annually by May 1
Potassium	mg/kg	Prior to application	Annually by May 1
Magnesium	mg/kg	Prior to application	Annually by May 1
Arsenic	mg/kg	Annually	By May 1 of the reporting year
Cadmium	mg/kg	Annually	By May 1 of the reporting year
Chromium	mg/kg	Annually	By May 1 of the reporting year
Copper	mg/kg	Annually	By May 1 of the reporting year
Lead	mg/kg	Annually	By May 1 of the reporting year
Mercury	mg/kg	Annually	By May 1 of the reporting year
Molybdenum	mg/kg	Annually	By May 1 of the reporting year
Nickel	mg/kg	Annually	By May 1 of the reporting year
Selenium	mg/kg	Annually	By May 1 of the reporting year
Zinc	mg/kg	Annually	By May 1 of the reporting year

- O. Annual reports must be sent to the Department and to the owner of the land receiving biosolids prior to May 1, which must include the following:

The biosolids and soil analyses conducted under Condition No. 9.N. above (including a statement that the analyses were performed in accordance with EPA Document SW-846, "Test Methods for Evaluation of Solid Wastes" or other approved procedures by the Department), application dates, and locations, quantities of biosolids applied in dry tons per acre per year and in gallons per acre per year, methods of disposal, amounts of nutrients applied, total elements added (in that particular year) in lbs per acre, total elements applied to date, and copies of soil analyses.

- P. The Permittee shall maintain complete copies of all the reports including the waste and soil analysis as listed in Condition No. 9.O. above for Department personnel review. In addition, the permittee must keep the land application log that includes records of waste source, waste type, field name or number (locations), application date, volumes of waste applied (in dry tons/acre-year or gallons/acre-year of waste), methods of disposal, identity of hauler, and type of crop grown for Department personnel review.

- Q. The permittee must also maintain copies of the above records for Department personnel review at the biosolids generating facility for a period of three (3) years.

10. The permittee may use any EPA approved method based on 40 CFR Part 136 provided the MQL for the chosen method is equal to or less than what has been specified in chart below:

Pollutant	MQL (µg/l)
Copper, Total Recoverable	0.5
Zinc, Total Recoverable	20
Mercury, Total Recoverable	0.005

The permittee may develop a matrix specific method detection limit (MDL) in accordance with Appendix B of 40 CFR Part 136. For any pollutant for which the permittee determines a site specific MDL, the permittee shall send to ADEQ, NPDES Permits Branch, a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that a site specific MDL was correctly calculated. A site specific minimum quantification level (MQL) shall be determined in accordance with the following calculation:

$$\text{MQL} = 3.3 \times \text{MDL}$$

Upon written approval by Permits Branch, the site specific MQL may be utilized by the permittee for all future Discharge Monitoring Report (DMR) calculations and reporting requirements.

11. Prior to final disposal, the effluent shall contain NO MEASURABLE TRC at any time. NO MEASURABLE will be defined as no detectable concentration of TRC as determined

by any approved method established in 40 CFR Part 136 as less than 0.1 mg/l. Thus, the "no measurable TRC concentration" for chlorine becomes the permit limit. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. TRC shall be measured within fifteen (15) minutes of sampling.

12. WHOLE EFFLUENT TOXICITY TESTING (7-DAY CHRONIC NOEC FRESHWATER)

1. SCOPE AND METHODOLOGY

- a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL(S):	001
REPORTED ON DMR AS FINAL OUTFALL:	001
CRITICAL DILUTION (%):	100%
EFFLUENT DILUTION SERIES (%):	32%, 42%, 56%, 75%, 100%
TESTING FREQUENCY	Once/quarter
COMPOSITE SAMPLE TYPE:	Defined at PART I
TEST SPECIES/METHODS:	40 CFR Part 136

Ceriodaphnia dubia chronic static renewal survival and reproduction test, Method 1002.0, EPA-821-R-02-013, or the most recent update thereof. This test should be terminated when 60% of the surviving females in the control produce three broods or at the end of eight days, whichever comes first.

Pimephales promelas (Fathead minnow) chronic static renewal 7-day larval survival and growth test, Method 1000.0, EPA-821-R-02-013, or the most recent update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

- b. The NOEC (No Observed Effect Concentration) is herein defined as the greatest effluent dilution at and below which toxicity (lethal or sub-lethal) that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Chronic lethal test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution. Chronic sub-lethal test failure is defined as a demonstration of a statistically significant sub-lethal

effect (i.e., growth or reproduction) at test completion to a test species at or below the critical dilution.

- c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

2. PERSISTENT LETHAL and/or SUB-LETHAL EFFECTS

The requirements of this subsection apply only when a toxicity test demonstrates significant lethal and/or sub-lethal effects at or below the critical dilution. The purpose of additional tests (also referred to as 'retests' or confirmation tests) is to determine the duration of a toxic event. A test that meets all test acceptability criteria and demonstrates significant toxic effects does not need additional confirmation. Such testing cannot confirm or disprove a previous test result.

If a frequency reduction, as specified in Item 6, has been granted and any subsequent valid test demonstrates significant lethal or sub-lethal effects to a test species at or below the critical dilution, the frequency of testing for that species is automatically increased to once per quarter for the life of the permit. In addition:

a. Part I Testing Frequency Other Than Monthly

- i. The permittee shall conduct a total of three (3) additional tests for any species that demonstrates significant toxic effects at or below the critical dilution. The additional tests shall be conducted monthly during the next three consecutive months. If testing on a quarterly basis, the permittee may substitute one of the additional tests in lieu of one routine toxicity test. A full report shall be prepared for each test required by this section in accordance with procedures outlined in Item 4 of this section and submitted with the period discharge monitoring report (DMR) to the permitting authority for review.
- ii. **IF LETHAL EFFECTS HAVE BEEN DEMONSTRATED** If any of the additional tests demonstrates significant lethal effects at or below the critical dilution, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements as specified in Item 5 of this section. The permittee shall notify ADEQ in writing within 5 days of the failure of any retest, and the TRE initiation date will be the test completion date of the first failed retest. A TRE may also be required due to a demonstration of intermittent lethal effects at or below the critical dilution, or for failure to perform the required retests. A TRE required based on lethal effects should consider any sub-lethal effects as well.

- iii. IF SUB-LETHAL EFFECTS ONLY HAVE BEEN DEMONSTRATED If any two of the three additional tests demonstrates significant sub-lethal effects at 75% effluent or lower, the permittee shall initiate the Sub-Lethal Toxicity Reduction Evaluation (TRE_{SL}) requirements as specified in Item 5 of this section. The permittee shall notify ADEQ in writing within 5 days of the failure of any retest, and the Sub-Lethal Effects TRE initiation date will be the test completion date of the first failed retest. A TRE may be also be required for failure to perform the required retests.
- iv. The provisions of Item 2.a.i. are suspended upon submittal of the TRE Action Plan.

b. Part I Testing Frequency of Monthly

The permittee shall initiate the Toxicity Reduction Evaluation (TRE) requirements as specified in Item 5 of this section when any two of three consecutive monthly toxicity tests exhibit significant toxic effects at or below the critical dilution. A TRE may also be required due to a demonstration of intermittent lethal and/or sub-lethal effects at or below the critical dilution, or for failure to perform the required retests.

3. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

- i. The toxicity test control (0% effluent) must have survival equal to or greater than 80%.
- ii. The mean number of Ceriodaphnia dubia neonates produced per surviving female in the control (0% effluent) must be 15 or more.
- iii. 60% of the surviving control females must produce three broods. The mean dry weight of surviving Fathead minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.25 mg per larva or greater.
- iv. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: the young of surviving

females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test.

- v. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal or sub-lethal effects are exhibited for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test.
- vi. If a test passes, yet the percent coefficient of variation between replicates is greater than 40% in the control (0% effluent) and/or in the critical dilution for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test, the test is determined to be invalid. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.
- vii. If a test fails, test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%.
- viii. A Percent Minimum Significant Difference (PMSD) range of 13 - 47 for Ceriodaphnia dubia reproduction;
- ix. A PMSD range of 12 - 30 for Fathead minnow growth.

b. Statistical Interpretation

- i. For the Ceriodaphnia dubia survival test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be Fisher's Exact Test as described in EPA/821/R-02-013 or the most recent update thereof.
- ii. For the Ceriodaphnia dubia reproduction test and the Fathead minnow larval survival and growth test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA/821/R-02-013 or the most recent update thereof.
- iii. If the conditions of Test Acceptability are met in Item 3.a above and the percent survival of the test organism is equal to or greater than 80% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report a survival NOEC of not less

than the critical dilution for the DMR reporting requirements found in Item 4 below.

c. Dilution Water

i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;

(A) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and

(B) toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.

ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

(A) a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;

(B) the test indicating receiving water toxicity has been carried out to completion (i.e., 7 days);

(C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 below; and

(D) the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites

i. The permittee shall collect a minimum of three flow-weighted composite samples from the outfall(s) listed at Item 1.a above. Unless otherwise stated in this section, a composite sample for

WET shall consist of a minimum of 12 subsamples gathered at equal time intervals during a 24-hour period.

- ii. The permittee shall collect second and third composite samples for use during 24-hour renewals of each dilution concentration for each test. The permittee must collect the composite samples such that the effluent samples, on use, are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on a regular or intermittent basis.
- iii. The permittee must collect all three flow-weighted composite samples within the monitoring period. Second and/or third composite samples shall not be collected into the next monitoring period; such tests will be determined to be invalid. Monitoring period definitions are listed in Part IV.
- iv. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 72 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to 6 degrees Centigrade during collection, shipping, and/or storage.
- v. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 4 of this section.
- vi. MULTIPLE OUTFALLS: If the provisions of this section are applicable to multiple outfalls, the permittee shall combine the composite effluent samples in proportion to the average flow from the outfalls listed in item 1.a. above for the day the sample was collected. The permittee shall perform the toxicity test on the flow-weighted composite of the outfall samples.
- vii. If chlorination is part of the treatment process, the permittee shall not allow the sample to be dechlorinated at the laboratory. At the

time of sample collection the permittee shall measure the TRC of the effluent. The measured concentration of TRC for each sample shall be included in the lab report submitted by the permittee.

4. REPORTING

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA/821/R-02-013, or the most current publication, for every valid or invalid toxicity test initiated whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.7 of this permit. The permittee shall submit full reports. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.
- b. A valid test for each species must be reported on the DMR during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of WET test data for each species is to be recorded on the DMR for each reporting period. The data submitted should reflect the LOWEST lethal and sub-lethal effects results for each species during the reporting period. The full reports for all invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached to the DMR for Agency review.
- c. The permittee shall submit the results of each valid toxicity test on the subsequent monthly DMR for that reporting period in accordance with PART III.D.4 of this permit, as follows below. Submit retest information clearly marked as such with the following month's DMR. Only results of valid tests are to be reported on the DMR.
 - i. Pimephales promelas (Fathead minnow)
 - (A) If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TLP6C
 - (B) Report the NOEC value for survival, Parameter No. TOP6C
 - (C) Report the NOEC value for growth, Parameter No. TPP6C
 - (D) If the NOEC for growth is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TGP6C

- (E) Report the highest (critical dilution or control) Coefficient of Variation for growth, Parameter No. TQP6C

ii. Ceriodaphnia dubia

- (A) If the NOEC for survival is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TLP3B
- (B) Report the NOEC value for survival, Parameter No. TOP3B
- (C) Report the NOEC value for reproduction, Parameter No. TPP3B
- (D) If the NOEC for reproduction is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TGP3B
- (E) Report the higher (critical dilution or control) Coefficient of Variation for reproduction, Parameter No. TQP3B

5. TOXICITY REDUCTION EVALUATIONS (TREs)

TREs for lethal and sub-lethal effects are performed in a very similar manner. EPA Region 6 is currently addressing TREs as follows: a sub-lethal TRE (TRE_{SL}) is triggered based on three sub-lethal test failures while a lethal effects TRE (TRE_L) is triggered based on only two test failures for lethality. In addition, EPA Region 6 will consider the magnitude of toxicity and use flexibility when considering a TRE_{SL} where there are no effects at effluent dilutions of less than 76% effluent.

- a. Within ninety (90) days of confirming persistent toxicity, the permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality-based effluent limits by reducing an effluent's toxicity to an acceptable level. A TRE is defined as a step-wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity. The goal of the TRE is to maximally reduce the toxic effects of effluent at the critical dilution and includes the following:

- i. Specific Activities. The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, identifications and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Characterization Procedures the permittee shall perform multiple characterizations and follow the procedures specified in the documents 'Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures' (EPA-600/6-91/003) and 'Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I' (EPA-600/6-91/005F), or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents 'Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity' C (EPA/600/R-92/080) and 'Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity' (EPA/600/R-92/081), as appropriate.

The documents referenced above may be obtained through the National Technical Information Service (NTIS) by phone at (703) 487-4650, or by writing:

U.S. Department of Commerce
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161

- ii. Sampling Plan (e.g., locations, methods, holding times, chain of custody, preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified;

Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where lethality was demonstrated within 48 hours of test initiation, each composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample,

comprised of equal portions of the individual composite samples, for the chemical specific analysis;

- iii. Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.); and
 - iv. Project Organization (e.g., project staff, project manager, consulting services, etc.).
- b. The permittee shall initiate the TRE Action Plan within thirty (30) days of plan and schedule submittal. The permittee shall assume all risks for failure to achieve the required toxicity reduction.
- c. The permittee shall submit a quarterly TRE Activities Report, with the Discharge Monitoring Report in the months of January, April, July and October, containing information on toxicity reduction evaluation activities including:
- i. any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
 - ii. any studies/evaluations and results on the treatability of the facility's effluent toxicity; and
 - iii. any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant toxicity at the critical dilution.
 - iv. A copy of the TRE Activities Report shall also be submitted to the state agency.
- d. The permittee shall submit a Final Report on Toxicity Reduction Evaluation Activities no later than twenty-eight (28) months from confirming toxicity in the retests, which provides information pertaining to the specific control mechanism selected that will, when implemented, result in reduction of effluent toxicity to no significant toxicity at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism.

A copy of the Final Report on Toxicity Reduction Evaluation Activities shall also be submitted to the state agency.

- e. Quarterly testing during the TRE is a minimum monitoring requirement. EPA recommends that permittees required to perform a TRE not rely on quarterly testing alone to ensure success in the TRE, and that additional screening tests be performed to capture toxic samples for identification of

toxicants. Failure to identify the specific chemical compound causing toxicity test failure will normally result in a permit limit for whole effluent toxicity limits per federal regulations at 40 CFR 122.44(d)(1)(v).

6. MONITORING FREQUENCY REDUCTION

- a. The permittee may apply for a testing frequency reduction upon the successful completion of the first four consecutive quarters or first twelve consecutive months (in accordance with Item 1.a.) of testing for one or both test species, with no lethal or sub-lethal effects demonstrated at or below the critical dilution. If granted, the monitoring frequency for that test species may be reduced to not less than once per year for the less sensitive species (usually the Fathead minnow) and not less than twice per year for the more sensitive test species (usually the Ceriodaphnia dubia).
- b. CERTIFICATION - The permittee must certify in writing that no test failures have occurred and that all tests meet all test acceptability criteria in item 3.a. above. In addition the permittee must provide a list with each test performed including test initiation date, species, NOECs for lethal and sub-lethal effects and the maximum coefficient of variation for the controls. Upon review and acceptance of this information the agency will issue a letter of confirmation of the monitoring frequency reduction. A copy of the letter will be forwarded to the agency's Permit Compliance System section to update the permit reporting requirements.
- c. SUB-LETHAL OR SURVIVAL FAILURES - If any test fails the survival or sub-lethal endpoint at any time during the life of this permit, three monthly retests are required and the monitoring frequency for the affected test species shall be increased to once per quarter until the permit is re-issued. Monthly retesting is not required if the permittee is performing a TRE.

Any monitoring frequency reduction granted applies only until the expiration date of this permit, at which time the monitoring frequency for both test species reverts to once per quarter until the permit is re-issued.

13. CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS

A. The permittee shall operate an industrial pretreatment program in accordance with Section 402(b)(8) of the Clean Water Act, the General Pretreatment Regulations (40 CFR Part 403) and the approved POTW pretreatment program submitted by the permittee. The pretreatment program was approved on January 13, 1984 and modified on March 10, 1992. The Sewer Use Ordinance and the Pretreatment Program have not been modified to come into compliance with the current 40 CFR 403 regulations. The permittee shall submit all necessary proposed modifications to ADEQ. The POTW pretreatment program is hereby incorporated by reference and shall be implemented in a manner consistent with the following requirements:

- (1) Industrial user information shall be updated at a frequency adequate to ensure that all IUs are properly characterized at all times;
- (2) The frequency and nature of industrial user compliance monitoring activities by the permittee shall be commensurate with the character, consistency and volume of waste. The permittee must inspect and sample the effluent from each Significant Industrial User in accordance with 40 CFR 403.8(f)(2)(v). This is in addition to any industrial self-monitoring activities;
- (3) The permittee shall enforce and obtain remedies for noncompliance by any industrial users with applicable pretreatment standards and requirements;
- (4) The permittee shall control through permit, order, or similar means, the contribution to the POTW by each Industrial User to ensure compliance with applicable Pretreatment Standards and Requirements. In the case of Industrial Users identified as significant under 40 CFR 403.3 (v), this control shall be achieved through individual or general control mechanisms, in accordance with 40 CFR 403.8(f)(1)(iii). Both individual and general control mechanisms must be enforceable and contain, at a minimum, the following conditions:
 1. Statement of duration (in no case more than five years);
 2. Statement of non-transferability without, at a minimum, prior notification to the POTW and provision of a copy of the existing control mechanism to the new owner or operator;
 3. Effluent limits, including Best Management Practices, based on applicable general Pretreatment Standards, categorical Pretreatment Standards, local limits, and State and local law;
 4. Self-monitoring, sampling, reporting, notification and recordkeeping requirements, including an identification of the pollutants to be monitored (including the process for seeking a waiver for a pollutant neither present nor expected to be present in the Discharge in accordance with § 403.12(e)(2), or a

specific waiver for a pollutant in the case of an individual control mechanism), sampling location, sampling frequency, and sample type, based on the applicable general Pretreatment Standards in 40 CFR 403, categorical Pretreatment Standards, local limits, and State and local law;

5. Statement of applicable civil and criminal penalties for violation of Pretreatment Standards and requirements, and any applicable compliance schedule. Such schedules may not extend the compliance date beyond federal deadlines; and
 6. Requirements to control slug discharges, if determined by the POTW to be necessary.
- (5) The permittee shall evaluate, whether each Significant Industrial User needs a plan or other action to control slug discharges, in accordance with 40 CFR 403.8(f)(2)(vi);
 - (6) The permittee shall provide adequate staff, equipment, and support capabilities to carry out all elements of the pretreatment program; and
 - (7) The approved program shall not be modified by the permittee without the prior approval of ADEQ.
- B. The permittee shall establish and enforce specific limits to implement the provisions of 40 CFR Parts 403.5(a) and (b), as required by 40 CFR Part 403.5(c). POTWs may develop Best Management Practices (BMPs) to implement paragraphs 40 CFR 403.5(c)(1) and (c)(2). Such BMPs shall be considered local limits and Pretreatment Standards. Each POTW with an approved pretreatment program shall continue to develop these limits as necessary and effectively enforce such limits.

The permittee shall submit, within sixty (60) days of the effective date of this permit, (1) a **WRITTEN CERTIFICATION** that a technical evaluation has demonstrated that the existing technically based local limits (TBLL) are based on current state water quality standards and are adequate to prevent pass through of pollutants, inhibition of or interference with the treatment facility, worker health and safety problems, and sludge contamination, **OR** (2) a **WRITTEN NOTIFICATION** that a technical evaluation revising the current TBLL and a draft sewer use ordinance which incorporates such revisions will be submitted within 12 months of the effective date of this permit.

All specific prohibitions or limits developed under this requirement are deemed to be conditions of this permit. The specific prohibitions set out in 40 CFR Part 403.5(b) shall be enforced by the permittee unless modified under this provision.

- C. The permittee shall analyze the treatment facility influent and effluent for the presence of the toxic pollutants listed in 40 CFR 122 Appendix D (NPDES Application Testing Requirements) Table II at least once/year and the toxic pollutants in Table III at least 4 times/year in each quarter (Jan-Mar, Apr-Jun, Jul-Sep & Oct-Dec).. If, based upon information available to the permittee, there is reason to suspect the presence of any toxic

or hazardous pollutant listed in Table V, or any other pollutant, known or suspected to adversely affect treatment plant operation, receiving water quality, or solids disposal procedures, analysis for those pollutants shall be performed at least 4 times/year in each quarter on both the influent and the effluent.

The influent and effluent samples collected shall be composite samples consisting of at least 12 aliquots collected at approximately equal intervals over a representative 24 hour period and composited according to flow. Sampling and analytical procedures shall be in accordance with guidelines established in 40 CFR 136. Where composite samples are inappropriate, due to sampling, holding time, or analytical constraints, at least 4 grab samples, taken at equal intervals over a representative 24 hour period, shall be taken.

- D. The permittee shall prepare annually a list of Industrial Users which during the preceding twelve months were in significant noncompliance with applicable pretreatment requirements. For the purposes of this Part, significant noncompliance shall be determined based upon the more stringent of either criteria established at 40 CFR Part 403.8(f)(2)(viii) [rev. 10/14/05] or criteria established in the approved POTW pretreatment program. This list is to be published annually in the newspaper of general circulation that provides meaningful public notice within the jurisdiction(s) served by the POTW during the month of February.

In addition, during the month of February the permittee shall submit an updated pretreatment program status report to the ADEQ containing the following information:

- (1) An updated list of all significant industrial users and identify which Industrial Users are Non-Significant Categorical Industrial Users (NSCIUs) or Middle Tier CIUs. The list must also identify:
 - (a) Industrial Users subject to categorical Pretreatment Standards that are subject to reduced monitoring and reporting requirements under 40 CFR 403.12(e)(2) & (3),
 - (b) Industrial Users subject to the following categorical Pretreatment Standards [Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF) (40 CFR Part 414), Petroleum Refining (40 CFR Part 419), and Pesticide Chemicals (40 CFR Part 455)] and for which the Control Authority has chosen to use the concentration-based standards rather than converting them to flow-based mass standards as allowed at 40 CFR 403.6(c)(6).
 - (c) Categorical Industrial Users subject to concentration-based standards for which the Control Authority has chosen to convert the concentration-based standards to equivalent mass limits, as allowed at 40 CFR 403.6(c)(5).
 - (d) General Control Mechanisms used for similar groups of SIUs along with the substantially similar types of operations and the types of wastes that are the same,

for each separate General Control Mechanism, as allowed at 40 CFR 403.8(f)(1)(iii).

- (e) Best Management Practices or Pollution Prevention alternatives required by a categorical Pretreatment Standard or as a local limit requirement that are implemented and documentation to demonstrate compliance, as required at 40 CFR 403 (b), (e) and (h).
- (2) For each industrial user listed the following information shall be included:
- (a) Standard Industrial Classification (SIC) and NAICS code and categorical determination;
 - (b) Control document status. Whether the user has an effective control document, and the date such document was last issued, reissued, or modified, (indicate which industrial users were added to the system (or newly identified) within the previous 12 months);
 - (c) A summary of all monitoring activities performed within the previous 12 months. The following information shall be reported:
 - * total number of inspections performed;
 - * total number of sampling visits made;
 - (d) Status of compliance with both effluent limitations and reporting requirements. Compliance status shall be defined as follows:
 - * Compliant (C) - no violations during the previous 12 month period;
 - * Non-compliant (NC) - one or more violations during the previous 12 months but does not meet the criteria for significantly noncompliant industrial users;
 - * Significant Noncompliance (SNC) - in accordance with requirements described in d. above; and
 - (e) For significantly noncompliant industrial users, indicate the nature of the violations, the type and number of actions taken (notice of violation, administrative order, criminal or civil suit, fines or penalties collected, etc.) and current compliance status. If ANY industrial user was on a schedule to attain compliance with effluent limits, indicate the date the schedule was issued and the date compliance is to be attained;
- (3) A list of all significant industrial users whose authorization to discharge was terminated or revoked during the preceding 12 month period and the reason for termination;
- (4) A report on any interference, pass through, upset or POTW permit violations known or suspected to be caused by industrial contributors and actions taken by the permittee

in response;

- (5) The results of all influent and effluent analyses performed pursuant to paragraph (c) above;
 - (6) A copy of the newspaper publication of the significantly noncompliant industrial users giving the name of the newspaper and the date published;
 - (7) The information requested may be submitted in tabular form as per the example tables provided for your convenience (See Attachment A, B and C); and
 - (8) The monthly average water quality based effluent concentration necessary to meet the state water quality standards as developed in the approved technically based local limits.
- E. The permittee shall provide adequate notice of the following:
- (1) Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Act if it were directly discharging those pollutants; and
 - (2) Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Adequate notice shall include information on (i) the quality and quantity of effluent to be introduced into the treatment works, and (ii) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

**PART III
STANDARD CONDITIONS**

SECTION A – GENERAL CONDITIONS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Water Act and the Arkansas Water and Air Pollution Control Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; and/or for denial of a permit renewal application. **Any values reported in the required Discharge Monitoring Report (DMR) which are in excess of an effluent limitation specified in Part I shall constitute evidence of violation of such effluent limitation and of this permit.**

2. Penalties for Violations of Permit Conditions

The Arkansas Water and Air Pollution Control Act provides that any person who violates any provisions of a permit issued under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year, or a fine of not more than twenty-five thousand dollars (\$25,000) or by both such fine and imprisonment for each day of such violation. Any person who violates any provision of a permit issued under the Act may also be subject to civil penalty in such amount as the court shall find appropriate, not to exceed ten thousand dollars (\$10,000) for each day of such violation. The fact that any such violation may constitute a misdemeanor shall not be a bar to the maintenance of such civil action.

3. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause including, but not limited to the following:

- A. Violation of any terms or conditions of this permit; or
- B. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- C. A change in any conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- D. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination.
- E. Failure of the permittee to comply with the provisions of APCEC Regulation No. 9 (Permit fees) as required by Part III.A.10. herein.

The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

4. Toxic Pollutants

Notwithstanding Part III.A.3., if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under APCEC Regulation No. 2, as amended, or Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitations on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standards or prohibition and the permittee so notified.

The permittee shall comply with effluent standards, narrative criteria, or prohibitions established under APCEC Regulation No. 2, as amended, or Section 307 (a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Civil and Criminal Liability

Except as provided in permit conditions on "Bypassing" (Part III.B.4.a.), and "Upsets" (Part III.B.5.b), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of this permit or applicable state and federal statutes or regulations which defeats the regulatory purposes of the permit may subject the permittee to criminal enforcement pursuant to the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended).

6. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 of the Clean Water Act.

7. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.

8. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

9. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provisions of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

10. Applicable Federal, State or Local Requirements

Permittees are responsible for compliance with all applicable terms and conditions of this permit. Receipt of this permit does not relieve any operator of the responsibility to comply with any other applicable federal such as endangered species, state or local statute, ordinance or regulation.

11. Permit Fees

The permittee shall comply with all applicable permit fee requirements for wastewater discharge permits as described in APCEC Regulation No. 9 (Regulation for the Fee System for Environmental Permits). Failure to promptly remit all required fees shall be grounds for the Director to initiate action to terminate this permit under the provisions of 40 CFR Parts 122.64 and 124.5 (d), as adopted in APCEC Regulation No. 6 and the provisions of APCEC Regulation No. 8.

SECTION B – OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

- A. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- B. The permittee shall provide an adequate operating staff which is duly qualified to carryout operation, maintenance, and testing functions required to insure compliance with the conditions of this permit.

2. Need to Halt or Reduce not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or discharges or both until the facility is restored or an alternative method of

treatment is provided. This requirement applies, for example, when the primary source of power for the treatment facility is reduced, is lost, or alternate power supply fails.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment or the water receiving the discharge.

4. Bypass of Treatment Facilities

A. Bypass not exceeding limitation

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts III.B.4.b. and 4.c.

B. Notice

1. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
2. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part III.D.6. (24-hour notice).

C. Prohibition of bypass

1. Bypass is prohibited and the Director may take enforcement action against a permittee for bypass, unless:
 - (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (b) There were no feasible alternatives to the 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 the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal or preventive maintenance; and
 - (c) The permittee submitted notices as required by Part III.B.4.b.
2. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in Part III.B.4.c.(1).

5. Upset Conditions

- A. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Part III.B.5.b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- B. Conditions necessary for demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
1. An upset occurred and that the permittee can identify the specific cause(s) of the upset;
 2. The permitted facility was at the time being properly operated.
 3. The permittee submitted notice of the upset as required by Part III.D.6.; and
 4. The permittee complied with any remedial measures required by Part III.B.3.
- C. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of waste waters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering the waters of the State. Written approval must be obtained from the ADEQ prior to removal of substances. Additionally, the permittee shall give at least 120 days prior notice to the Director of any change planned in the permittee's sludge disposal practice or land use applications, including types of crops grown (if applicable). Produced sludge shall be disposed of by land application only when meeting the following criteria:

- A. Sewage sludge from treatment works treating domestic sewage (TWTDS) must meet the applicable provisions of 40 CFR Part 503; and
- B. The sewage sludge has not been classified as a hazardous waste under state or federal regulations.

7. Power Failure

The permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failure either by means of alternate power sources, standby generators, or retention of inadequately treated effluent.

SECTION C – MONITORING AND RECORDS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Director. Intermittent discharges shall be monitored.

2. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to insure the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than +/- 10% from true discharge rates throughout the range of expected discharge volumes and shall be installed at the monitoring point of the discharge.

Calculated Flow Measurement

For calculated flow measurements that are performed in accordance with either the permit requirements or a Department approved method (i.e., as allowed under Part II.4), the +/- 10% accuracy requirement described above is waived. This waiver is only applicable when the method used for calculation of the flow has been reviewed and approved by the Department.

3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals frequent enough to insure accuracy of measurements and shall insure that both calibration and maintenance activities will be conducted. An adequate analytical quality control program, including the analysis of sufficient standards, spikes, and duplicate samples to insure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory. At a minimum, spikes and duplicate samples are to be analyzed on 10% of the samples.

4. Penalties for Tampering

The Arkansas Water and Air Pollution Control Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year or a fine of not more than ten thousand dollars (\$10,000) or by both such fine and imprisonment.

5. Reporting of Monitoring Results

Monitoring results must be reported on a Discharge Monitoring Report (DMR) form provided by the Department or other form/method approved in writing by the Department (e.g., electronic submittal of DMR once approved). Monitoring results obtained during the previous monitoring period shall be summarized and reported on a DMR form postmarked no later than the 25th day of the month or submitted electronically by 6:00 p.m. of the 25th (after NETDMR is approved), following the completed reporting period beginning on the effective date of the permit. When mailing the DMRs, duplicate copies of the forms signed and certified as required by Part III.D.11 and all other reports required by Part III.D, shall be submitted to the Director at the following address:

Enforcement Branch
Water Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

If permittee uses outside laboratory facilities for sampling and/or analysis, the name and address of the contract laboratory shall be included on the DMR.

6. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated on the DMR.

7. Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time.

8. Record Contents

Records and monitoring information shall include:

- A. The date, exact place, time and methods of sampling or measurements, and preservatives used, if any;
- B. The individual(s) who performed the sampling or measurements;
- C. The date(s) and time analyses were performed;
- D. The individual(s) who performed the analyses;
- E. The analytical techniques or methods used; and
- F. The measurements and results of such analyses.

9. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- A. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and
- D. Sample, inspect, or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

SECTION D – REPORTING REQUIREMENTS

1. Planned Changes

The permittee shall give notice within 180 days and provide plans and specification (if applicable) to the Director for review and approval prior to any planned physical alterations or additions to the permitted facility. In no case are any new connections, increased flows, removal of substances, or significant changes in influent quality permitted that cause violation of the effluent limitations specified herein.

2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers

The permit is nontransferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.

4. **Monitoring Reports**

Monitoring results shall be reported at the intervals and in the form specified in Part III.C.5. **Discharge Monitoring Reports must be submitted even when no discharge occurs during the reporting period.**

5. **Compliance Schedule**

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

6. **Twenty-four Hour Report**

- A. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain the following information:
1. a description of the noncompliance and its cause;
 2. the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
 3. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
- B. The following shall be included as information which must be reported within 24 hours:
1. Any unanticipated bypass which exceeds any effluent limitation in the permit;
 2. Any upset which exceeds any effluent limitation in the permit and
 3. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part I of the permit to be reported within 24 hours to the Enforcement Section of the Water Division of the ADEQ.
- C. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours to the Enforcement Section of the Water Division of the ADEQ.

7. **Other Noncompliance**

The permittee shall report all instances of noncompliance not reported under Parts III.D.4., 5., and 6., at the time monitoring reports are submitted. The reports shall contain the information listed at Part III.D.6.

8. Changes in Discharge of Toxic Substances for Industrial Dischargers

The permittee shall notify the Director as soon as he/she knows or has reason to believe:

- A. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" described in 40 CFR Part 122.42(a)(1); or
- B. That any activity has occurred or will occur which would result in any discharge on a non-routine or infrequent basis of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" described in 40 CFR Part 122.42(a)(2).

9. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit. Information shall be submitted in the form, manner and time frame requested by the Director.

10. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The complete application shall be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be governed by regulations promulgated in APCEC Regulation No. 6.

11. Signatory Requirements

All applications, reports, or information submitted to the Director shall be signed and certified as follows:

A. All **permit applications** shall be signed as follows:

- 1. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - (a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or
 - (b) The manager of one or more manufacturing, production, or operation facilities, provided: the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating

and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

2. For a partnership or sole proprietorship: by a general partner or proprietor, respectively; or
 3. For a municipality, State, Federal, or other public agency, by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - (a) The chief executive officer of the agency, or
 - (b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.
- B. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
1. The authorization is made in writing by a person described above.
 2. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 3. The written authorization is submitted to the Director.
- C. Certification. Any person signing a document under this section shall make the following certification:

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

12. Availability of Reports

Except for data determined to be confidential under 40 CFR Part 2 and APCEC Regulation No. 6, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department of Environmental Quality. As required by the Regulations, the name and address of any permit applicant or permittee, permit applications, permits, and effluent data shall not be considered confidential.

13. Penalties for Falsification of Reports

The Arkansas Air and Water Pollution Control Act provides that any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this permit shall be subject to civil penalties specified in Part III.A.2. and/or criminal penalties under the authority of the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended).

14. Applicable Federal, State or Local Requirements

Permittees are responsible for compliance with all applicable terms and conditions of this permit. Receipt of this permit does not relieve any operator of the responsibility to comply with any other applicable federal, state, or local statute, ordinance, policy, or regulation.

PART IV DEFINITIONS

All definitions contained in Section 502 of the Clean Water Act and 40 CFR 122.2 shall apply to this permit and are incorporated herein by reference. Additional definitions of words or phrases used in this permit are as follows:

1. **"Act"** means the Clean Water Act, Public Law 95-217 (33.U.S.C. 1251 et seq.) as amended.
2. **"Administrator"** means the Administrator of the U.S. Environmental Protection Agency.
3. **"APCEC"** means the Arkansas Pollution Control and Ecology Commission.
4. **"Applicable effluent standards and limitations"** means all State and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards of performance, toxic effluent standards and prohibitions, and pretreatment standards.
5. **"Applicable water quality standards"** means all water quality standards to which a discharge is subject under the federal Clean Water Act and which has been (a) approved or permitted to remain in effect by the Administrator following submission to the Administrator pursuant to Section 303(a) of the Act, or (b) promulgated by the Director pursuant to Section 303(b) or 303(c) of the Act, and standards promulgated under (APCEC) Regulation No. 2, as amended.
6. **"Bypass"** As defined at 122.41(m).
7. **"Composite sample"** is a mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing a minimum of 4 effluent portions collected at equal time intervals (but not closer than one hour apart) during operational hours, within the 24-hour period, and combined proportional to flow or a sample collected at more frequent intervals proportional to flow over the 24-hour period.
8. **"Daily Discharge"** means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.
 - A. **Mass Calculations:** For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of pollutant discharged over the sampling day.
 - B. **Concentration Calculations:** For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.
8. **"Daily Maximum"** discharge limitation means the highest allowable "daily discharge" during the calendar month. The 7-day average for Fecal Coliform Bacteria (FCB) or E-Coli is the geometric mean of the values of all effluent samples collected during the calendar week in colonies per 100 ml.
9. **"Department"** means the Arkansas Department of Environmental Quality (ADEQ).
10. **"Director"** means the Director of the Arkansas Department of Environmental Quality.
11. **"Dissolved oxygen limit"**, shall be defined as follows:
 - A. When limited in the permit as a minimum monthly average, shall mean the lowest acceptable monthly average value, determined by averaging all samples taken during the calendar month;
 - B. When limited in the permit as an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.

12. **"E-Coli"** a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For E-Coli, report the monthly average as a 30-day geometric mean in colonies per 100 ml.
13. **"Fecal Coliform Bacteria (FCB)"** a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For Fecal Coliform Bacteria (FCB) report the monthly average as a 30-day geometric mean in colonies per 100 ml.
14. **"Grab sample"** means an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.
15. **"Industrial User"** means a nondomestic discharger, as identified in 40 CFR Part 403, introducing pollutants to a POTW.
16. **"Instantaneous Maximum"** when limited in the permit as an instantaneous maximum value, shall mean that no value measured during the reporting period may fall above the stated value.
17. **"Instantaneous Minimum"** an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
18. **"Monthly average"** means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. For Fecal Coliform Bacteria (FCB) or E-Coli, report the monthly average, (see 30-day average below).
19. **"National Pollutant Discharge Elimination System"** means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements under Sections 307, 402, 318, and 405 of the Clean Water Act.
20. **"POTW"** means a Publicly Owned Treatment Works.
21. **"Severe property damage"** means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in products.
22. **"Sewage sludge"** means the solids, residues, and precipitate separated from or created in sewage by the unit processes at a POTW. Sewage as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and stormwater runoff that are discharged to or otherwise enter a POTW.
23. **"7-day average"** Also known as Average weekly. means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.
24. **"Treatment works"** means any devices and systems used in storage, treatment, recycling, and reclamation of municipal sewage and industrial wastes, of a liquid nature to implement section 201 of the Act, or necessary to recycle reuse water at the most economic cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities, and any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment.
25. **"Upset"** means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond

the reasonable control of the permittee. Any upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventive maintenance, or careless of improper operations.

26. **"Visible sheen"** means the presence of a film or sheen upon or a discoloration of the surface of the discharge. A sheen can also be from a thin glistening layer of oil on the surface of the discharge.
27. **"MGD"** shall mean million gallons per day.
28. **"mg/l"** shall mean milligrams per liter or parts per million (ppm).
29. **"µg/l"** shall mean micrograms per liter or parts per billion (ppb).
30. **"cfs"** shall mean cubic feet per second.
31. **"ppm"** shall mean parts per million.
32. **"s.u."** shall mean standard units.
33. **"Weekday"** means Monday – Friday.
34. **Monitoring and Reporting:**

When a permit becomes effective, monitoring requirements are of the immediate period of the permit effective date. Where the monitoring requirement for an effluent characteristic is monthly or more frequently, the Discharge Monitoring Report (DMR) shall be submitted by the 25th of the month following the sampling. Where the monitoring requirement for an effluent characteristic is Quarterly, Semi-Annual, Annual, or Yearly, the DMR shall be submitted by the 25th of the month following the monitoring period end date.

A. MONTHLY:

is defined as a calendar month or any portion of a calendar month for monitoring requirement frequency of once/month or more frequently.

B. BI-MONTHLY:

is defined as two (2) calendar months or any portion of 2 calendar months for monitoring requirement frequency of once/2 months or more frequently.

C. QUARTERLY:

1. is defined as a **fixed calendar quarter** or any part of the fixed calendar quarter for a non-seasonal effluent characteristic with a measurement frequency of once/quarter. Fixed calendar quarters are: January through March, April through June, July through September, and October through December; or
2. is defined as a **fixed three month period** (or any part of the fixed three month period) of or dependent upon the seasons specified in the permit for a seasonal effluent characteristic with a monitoring requirement frequency of once/quarter that does not coincide with the fixed calendar quarter. Seasonal calendar quarters are: May through July, August through October, November through January, and February through April.

D. SEMI-ANNUAL:

is defined as the fixed time periods January through June, and July through December (or any portion thereof) for an effluent characteristic with a measurement frequency of once/6 months or twice/year.

E. ANNUAL or YEARLY:

is defined as a fixed calendar year or any portion of the fixed calendar year for an effluent characteristic or parameter with a measurement frequency of once/year. A calendar year is January through December, or any portion thereof.

Final Fact Sheet

This Fact Sheet is for information and justification of the permit limits only. Please note that it is not enforceable. This final permitting decision is for renewal of the discharge Permit Number AR0021768 with Arkansas Department of Environmental Quality (ADEQ) Facility Identification Number (AFIN) 58-00105 to discharge to Waters of the State.

1. PERMITTING AUTHORITY.

The issuing office is:

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

2. APPLICANT.

The applicant's mailing address is:

City Corporation - Russellville Water and Sewer System
P.O. Box 3186
Russellville, AR 72811

The facility address is:

City Corporation - Russellville Water and Sewer System
404 Jimmy Lile Road
Russellville, AR 72802

3. PREPARED BY.

The permit was prepared by:

Shane Byrum
Staff Engineer
Discharge Permits Section, Water Division
(501) 682-0618
E-mail: byrum@adeq.state.ar.us

4. PERMIT ACTIVITY.

Previous Permit Effective Date: 4/1/2005
Previous Permit Expiration Date: 3/31/2010

The permittee submitted a permit renewal application on 9/28/2009. The discharge permit is being reissued for a 5-year term in accordance with regulations promulgated at 40 CFR Part 122.46(a).

DOCUMENT ABBREVIATIONS

In the document that follows, various abbreviations are used. They are as follows:

BAT - best available technology economically achievable
BCT - best conventional pollutant control technology
BMP - best management plan
BOD₅ - five-day biochemical oxygen demand
BPJ - best professional judgment
BPT - best practicable control technology currently available
CBOD₅ - carbonaceous biochemical oxygen demand
CD - critical dilution
CFR - Code of Federal Regulations
cfs - cubic feet per second
COD - chemical oxygen demand
COE - United States Corp of Engineers
CPP - continuing planning process
CWA - Clean Water Act
DMR - discharge monitoring report
DO - dissolved oxygen
ELG - effluent limitation guidelines
EPA - United States Environmental Protection Agency
ESA - Endangered Species Act
FCB - fecal coliform bacteria
gpm - gallons per minute
MGD - million gallons per day
MQL - minimum quantification level
NAICS - North American Industry Classification System
NH₃-N - ammonia nitrogen
NO₃-N - nitrates
NO₃ + NO₂-N - nitrate + nitrite nitrogen
NPDES - National Pollutant Discharge Elimination System
O&G - oil and grease
Reg. 2 - APCEC Regulation No. 2
Reg. 6 - APCEC Regulation No. 6
Reg. 8 - APCEC Regulation No. 8
Reg. 9 - APCEC Regulation No. 9

- RP - reasonable potential
- SIC - standard industrial classification
- TDS - total dissolved solids
- TMDL - total maximum daily load
- TP - total phosphorus
- TRC - total residual chlorine
- TSS - total suspended solids
- UAA - use attainability analysis
- USFWS - United States Fish and Wildlife Service
- WET - Whole effluent toxicity
- WQMP - water quality management plan
- WQS - Water Quality standards
- WWTP - wastewater treatment plant

DMR Review:

The Discharge Monitoring Reports (DMR's) for the last three years (December 2006 – December 2009) were reviewed during the permit renewal process. The violations listed in the following table were noted. A consent administrative order (CAO) was issued in response to these violations. The CAO is discussed in more detail in the next section.

CBOD5	TSS	DO	TRC	FCB	Zinc	Copper	Nitrates
	DEC06						
	JAN07				JAN07		
	FEB07						
	DEC07						
	FEB08						
MAR08	MAR08	MAR08		MAR08			
	APR08	APR08	APR08				
			MAY08			MAY08	
			JUN08			JUN08	
			JUL08			JUL08	JUL08
			AUG08				AUG08
			SEP08				
			OCT08				OCT08
			NOV08				NOV08
	DEC08		DEC08				DEC08
	JAN09		JAN09				JAN09
	FEB09		FEB09				FEB09
	MAR09		MAR09				
	APR09		APR09	APR09	APR09	APR09	
			MAY09				
			JUN09				JUN09
			JUL09			JUL09	JUL09
			AUG09				AUG09

CBOD5	TSS	DO	TRC	FCB	Zinc	Copper	Nitrates
			SEP09				SEP09
		OCT09	OCT09				
			NOV09				
	DEC09		DEC09				DEC09

Legal Order Review:

The facility is currently under a Consent Administrative Order (CAO) (LIS No. 09-146) which was signed by the Director on 11/06/2009. This order required the facility to submit a Corrective Action Plan (CAP) to address the permit limit violations. The CAP was submitted and approved on 06/01/2010.

Inspection

A routine compliance inspection was performed by ADEQ on 4/22/2009 which revealed the following violations:

1. For soil and sludge analysis, pH is not being reported.
2. Influent samples are not flow composited.
3. Flow meter error is greater than 10% of actual calculated flow.
4. Weir plates on effluent weir are not beveled as required for plates thicker than ¼ inch.

A response to these violations was received from the permittee in a letter dated 5/21/2009. The Department responded by letter dated 6/16/2009 which states that the permittee's response letter adequately addressed the violations identified during the inspection.

Site Visit

A routine site visit was conducted on 3/23/2010. Several photos of the treatment process were taken. Coordinates were collected by a handheld GPS for the outfall and sampling location at the effluent weir. The major proposed changes to the permit were discussed including the revised NH₃-N limits and new proposed Mercury limits. The facility was given the opportunity to collect additional mercury data for re-evaluation of the reasonable potential calculations.

5. SIGNIFICANT CHANGES FROM THE PREVIOUSLY ISSUED PERMIT.

The permittee is responsible for carefully reading the permit in detail and becoming familiar with all of the changes therein:

1. Limits for CBOD₅, TSS, NH₃-N, and NO₃-N are now expressed to the nearest tenth for accuracy reporting purposes.
2. Ammonia-Nitrogen limits have changed for April - October based on toxicity standards in Reg. 2.512.

3. Final Mercury limits have been added which become effective three years after the effective date.
4. Interim Mercury monitor and report requirement was added for first three years of the permit.
5. A three year compliance schedule is included for Mercury.
6. Monitor and report requirement for Total Phosphorus was added to the permit in accordance with the CPP.

6. RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION.

The outfall is located at the following coordinates based on a Garmin GPS unit.

Latitude: 35° 14' 50" Longitude: 93° 06' 45"

The receiving waters named:

Whig Creek thence to the Arkansas River in Segment 3F of the Arkansas River Basin. The receiving stream with USGS Hydrologic Unit Code (H.U.C) of 11110203 and reach # 931 is a Water of the State classified for secondary contact recreation, raw water source for domestic (public and private), industrial, and agricultural water supplies, propagation of desirable species of fish and other aquatic life, and other compatible uses.

7. 303(d) LIST, ENDANGERED SPECIES, AND ANTI-DEGRADATION CONSIDERATIONS.

A. 303(d) List:

The receiving stream (Whig Creek) is listed on the 2008 303d list for Nitrates. A TMDL for Nitrates dated December 2000 specifies a wasteload allocation of 542 lb/day of nitrates from this point source.

The receiving stream (Whig Creek) is listed on the 2008 303d list for Copper. A TMDL for Copper dated November 2003 specifies a wasteload allocation of 0.188 lb/day of dissolved copper from this point source. Since metal limits in NPDES permits must be expressed in terms of total metal, the dissolved copper mass was converted to a total copper mass permit limit using the translator procedure given in the CPP.

B. Endangered Species:

No comments on the application were received from the U.S. Fish and Wildlife Service (USF&WS). The draft permit and Fact Sheet were sent to the USF&WS for their review and no comments were received.

C. Anti-Degradation:

The limitations and requirements set forth in this permit for discharge into waters of the State are consistent with the Antidegradation Policy and all other applicable water quality standards found in APC&EC Regulation No. 2.

8. OUTFALL AND TREATMENT PROCESS DESCRIPTION.

The following is a description of the facility described in the application:

A. Design Flow: 7.3 MGD

B. Type of Treatment: three (3) aerated flow equalization basins, bar screens, grit removal, three (3) primary clarifiers, two (2) biotowers, one (1) intermediate clarifier, two (2) trickling rock filters, two (2) extended aeration activated sludge basins, two (2) final clarifiers, and two (2) chlorine contact basins.

C. Discharge Description: treated municipal wastewater

D. Facility Status: This facility is classified as a major municipal since the design flow of the facility of 7.3 MGD is greater than 1.0 MGD.

9. ACTIVITY.

Under the Standard Industrial Classification (SIC) code of 4952 or North American Industry Classification System (NAICS) code of 221320, the applicant's activities are the operation of a sewage treatment plant.

10. INDUSTRIAL WASTEWATER CONTRIBUTIONS.

City Corporation receives industrial process wastewater. The pretreatment program was approved on January 13, 1984 and modified on March 10, 1992. The Sewer Use Ordinance and the Pretreatment Program have not been modified to come into compliance with the current 40 CFR 403 regulations. City Corporation has submitted both a draft ordinance and draft local limit development. The Department is currently reviewing both submittals.

11. SEWAGE SLUDGE PRACTICES.

The sludge produced at the treatment plant is aerobically digested on site and land applied at agronomic rates at the following locations:

Name	Field ID	Section	Township	Range	Acreage	Latitude	Longitude
City Corp	1	22	7 North	20 West	49	35° 14' 36" N	93° 6' 39" W
Baker	2	21	7 North	20 West	67.5	35° 14' 35" N	93° 7' 25" W
Old Pope County Landfill	3	21	7 North	20 West	76	35° 14' 44" N	93° 7' 40" W

Approval to land apply biosolids pursuant to this permit is limited to a maximum of one (1) year after the effective date of this permit. A separate permit must be obtained within this time period or land application of biosolids must cease. The permittee was notified of this requirement at the site visit conducted on 3/23/2010 and again at a meeting at ADEQ on 5/13/2010. Reporting requirements of this permit continue for the term of this permit until they are superseded by similar conditions in a separate land application permit.

12. PERMIT CONDITIONS.

The Arkansas Department of Environmental Quality has made a determination to issue a final permit for the discharge described in the application. Permit requirements are based on federal regulations (40 CFR Parts 122, 124, and Subchapter N), the National Pretreatment Regulation in 40 CFR Part 403 and regulations promulgated pursuant to the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et. seq.).

A. Interim Effluent Limitations

Outfall 001- treated municipal wastewater

1. Conventional and/or Toxic Pollutants

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
		Monthly Avg.	Monthly Avg.		
Flow	N/A	Report, MGD	Report, MGD (Daily Max.)	once/day	totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)					
(May-Oct)	608.8	10.0	15.0	once/weekday	composite
(Nov-Apr)	913.2	15.0	22.5	once/weekday	composite
Total Suspended Solids (TSS)					
(May-Oct)	913.2	15.0	22.5	once/weekday	composite
(Nov-Apr)	1217.6	20.0	30.0	once/weekday	composite
Ammonia Nitrogen (NH3-N)					
(April -October)	133.9	2.2	5.6	once/weekday	composite
(November - March)	243.5	4.0	6.0	once/weekday	composite
Dissolved Oxygen (DO)	N/A	6.0 (Inst. Min.)		once/weekday	grab
Fecal Coliform Bacteria (FCB)		(colonies/100 ml)			
	N/A	1000	2000	once/weekday	grab
Total Residual Chlorine (TRC)	N/A	<0.1 mg/l (Inst. Max.)		once/weekday	grab
Total Phosphorus (TP)	Report	Report	Report	once/month	grab
Nitrates (NO3-N)	542.0	10.0	15.0	once/weekday	grab
Zinc, Total Recoverable	5.2	85.5 µg/l	171.6 µg/l	once/month	composite
Copper, Total Recoverable	0.45	9.2 µg/l	18.5 µg/l	once/month	composite
Mercury, Total Recoverable	Report	Report µg/l	Report µg/l	once/month	composite
pH	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	once/weekday	grab
Chronic WET Testing	N/A	Report		once/quarter	composite
<u>Pimephales promelas (Chronic)</u> Pass/Fail Lethality (7-day NOEC) TLP6C Pass/Fail Growth (7-day NOEC) TGP6C Survival (7-day NOEC) TOP6C Coefficient of Variation (Growth) TQP6C Growth (7-day NOEC) TPP6C		<u>7-Day Average</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report %		once/quarter once/quarter once/quarter once/quarter once/quarter	composite composite composite composite composite

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
		Monthly Avg.	Monthly Avg.		
<u>Ceriodaphnia dubia (Chronic)</u> Pass/Fail Lethality (7-day NOEC) TLP3B Pass/Fail production (7-day NOEC) TGP3B Survival (7-day NOEC) TOP3B Coefficient of Variation (Reproduction) TQP3B Reproduction (7-day NOEC) TPP3B			<u>7-Day Average</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report %	once/quarter once/quarter once/quarter once/quarter once/quarter	composite composite composite composite composite

2. **Solids, Foam, and Free Oil:** There shall be no discharge of distinctly visible solids, scum, or foam of a persistent nature, nor shall there be any formation of slime, bottom deposits, or sludge banks. There shall be no visible sheen due to the presence of oil (Sheen means an iridescent appearance on the surface of the water).

B. Final Effluent Limitations

Outfall 001- treated municipal wastewater

1. Conventional and/or Toxic Pollutants

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
		Monthly Avg.	Monthly Avg.		
Flow	N/A	Report, MGD	Report, MGD (Daily Max.)	once/day	totalizing meter
Carbonaceous Biochemical Oxygen Demand (CBOD5)					
(May-Oct)	608.8	10.0	15.0	once/weekday	composite
(Nov-Apr)	913.2	15.0	22.5	once/weekday	composite
Total Suspended Solids (TSS)					
(May-Oct)	913.2	15.0	22.5	once/weekday	composite
(Nov-Apr)	1217.6	20.0	30.0	once/weekday	composite
Ammonia Nitrogen (NH3-N)					
(April -October)	133.9	2.2	5.6	once/weekday	composite
(November - March)	243.5	4.0	6.0	once/weekday	composite
Dissolved Oxygen (DO)	N/A	6.0 (Inst. Min.)		once/weekday	grab
Fecal Coliform Bacteria (FCB)		(colonies/100 ml)			
	N/A	1000	2000	once/weekday	grab
Total Residual Chlorine (TRC)	N/A	<0.1 mg/l (Inst. Max.)		once/weekday	grab
Total Phosphorus (TP)	Report	Report	Report	once/month	grab
Nitrates (NO3-N)	542.0	10.0	15.0	once/weekday	grab
Zinc, Total Recoverable	5.2	85.5 µg/l	171.6 µg/l	once/month	composite
Copper, Total Recoverable	0.45	9.2 µg/l	18.5 µg/l	once/month	composite
Mercury, Total Recoverable	0.00082	0.0134 µg/l	0.0269 µg/l	once/month	composite
pH	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	once/weekday	grab
Chronic WET Testing	N/A	Report		once/quarter	composite
Pimephales promelas (Chronic) Pass/Fail Lethality (7-day NOEC) TLP6C Pass/Fail Growth (7-day NOEC) TGP6C Survival (7-day NOEC) TOP6C Coefficient of Variation (Growth) TQP6C Growth (7-day NOEC) TPP6C		<u>7-Day Average</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report %		once/quarter once/quarter once/quarter once/quarter	composite composite composite composite

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
		Monthly Avg.	Monthly Avg.		
<u>Ceriodaphnia dubia (Chronic)</u> Pass/Fail Lethality (7-day NOEC) TLP3B Pass/Fail production (7-day NOEC) TGP3B Survival (7-day NOEC) TOP3B Coefficient of Variation (Reproduction) TQP3B Reproduction (7-day NOEC) TPP3B		<u>7-Day Average</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report %		once/quarter once/quarter once/quarter once/quarter once/quarter	composite composite composite composite composite

- Solids, Foam, and Free Oil:** There shall be no discharge of distinctly visible solids, scum, or foam of a persistent nature, nor shall there be any formation of slime, bottom deposits, or sludge banks. There shall be no visible sheen due to the presence of oil (Sheen means an iridescent appearance on the surface of the water).

13. BASIS FOR PERMIT CONDITIONS.

The following is an explanation of the derivation of the conditions of the final permit and the reasons for them or, in the case of notices of intent to deny or terminate, reasons suggesting the decisions as required under 40 CFR Part 124.7.

Technology-Based Versus Water Quality-Based Effluent Limitations And Conditions

Following regulations promulgated at 40 CFR Part 122.44, the final permit limits are based on either technology-based effluent limits pursuant to 40 CFR Part 122.44 (a) or on State water quality standards and requirements pursuant to 40 CFR Part 122.44 (d), whichever are more stringent as follows:

Parameter	Water Quality-Based		Technology-Based/BPJ		Previous Permit		Permit Limit	
	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l
CBOD5								
(May-Oct)	10.0	15.0	25	40	10	15	10.0	15.0
(Nov-Apr)	15.0	22.5	25	40	15	23	15.0	22.5
TSS								
(May-Oct)	N/A	N/A	30	45	15	23	15.0	22.5
(Nov-Apr)	N/A	N/A	30	45	20	30	20.0	30.0
NH3-N								
(Apr-Oct)*	2.2	5.6	N/A	N/A	4	6	2.2	5.6
(Nov-March)	4.0	6.0	N/A	N/A	4	6	4.0	6.0
DO	6.0 (Inst. Min.)		N/A		6.0 (Inst. Min.)		6.0 (Inst. Min.)	
FCB (col/100 ml)	1000	2000	N/A	N/A	1000	2000	1000	2000
TRC (Inst. Max)	N/A		<0.1 mg/l		<0.1 mg/l		<0.1 mg/l	
Total Phosphorus	N/A	N/A	Report	Report	N/A	N/A	Report	Report
Nitrates	10.0	15.0	N/A	N/A	10	15	10.0	15.0
Total Zinc	85.5 µg/l	171.6 µg/l	N/A	N/A	86 µg/l	172 µg/l	85.5 µg/l	171.6 µg/l
Total Copper	9.2 µg/l	18.5 µg/l	N/A	N/A	9.2 µg/l	18.5 µg/l	9.2 µg/l	18.5 µg/l

Parameter	Water Quality-Based		Technology-Based/BPJ		Previous Permit		Permit Limit	
	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l
Total Mercury	0.0134 µg/l	0.0269 µg/l	N/A	N/A	N/A	N/A	0.0134 µg/l	0.0269 µg/l
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.	

*Compliance schedule was not deemed necessary by the permit writer because a review of the DMR data from December 2006 to December 2009 indicate that the facility is currently capable of meeting the more stringent revised NH3-N limits.

A. Justification for Limitations and Conditions of the final permit:

Parameter	Water Quality or Technology	Justification
CBOD5	Water Quality	MultiSMP Model dated 9/27/2004
TSS ¹	Technology	CPP
NH3-N	Water Quality	Reg. 2.512 / MultiSMP Model dated 9/27/2004
DO	Water Quality	Reg. 2.505 / MultiSMP Model dated 9/27/2004
Fecal Coliform Bacteria	Water Quality	Reg. 2.507
TRC ²	Water Quality	Reg. 2.409 and CPP
Total Phosphorus ³	Technology	CPP
Nitrates	Water Quality	December 2000 TMDL report
Total Copper	Water Quality	November 2003 TMDL report and Reg. 2.508
Total Zinc	Water Quality	Reg. 2.508 and CPP
Total Mercury	Water Quality	Reg. 2.508 and CPP
pH	Water Quality	Reg. 2.504
WET Testing	Water Quality	CPP

1. The CPP states that TSS limits for domestic wastewater discharges are typically between 1-3 times the BOD5/CBOD5 limit.
2. Average TRC measured in the effluent from August 2007 to August 2009 was 0.5 mg/l. This is higher than EPA's toxicity criteria of 0.011 mg/l. Therefore, the TRC limit is being continued from the previous permit since the data shows reasonable potential to exceed the toxicity criteria at the edge of the mixing zone.
3. In order to establish a database of point source loadings of nutrients to waters of the state, Total Phosphorus monitoring and reporting is included in the permit.

B. Anti-backsliding

The final permit is consistent with the requirements to meet Anti-backsliding provisions of the Clean Water Act (CWA), Section 402(o) [40 CFR 122.44(l)]. The final effluent limitations for reissuance permits must be as stringent as those in the previous permit, unless the less stringent limitations can be justified using exceptions listed in 40 CFR 122.44 (l)(2)(i).

The final permit maintains the requirements of the previous permit.

C. Limits Calculations

1. Mass limits:

In accordance with 40 CFR 122.45(f)(1), all pollutants limited in permits shall have limitations expressed in terms of mass if feasible. 40 CFR 122.45(f)(2) allows for pollutants which are limited in terms of mass to also be limited in terms of other units of measurement.

The calculation of the loadings (lbs per day) for CBOD5, TSS, NH3-N, Zinc, and Mercury uses a design flow of 7.3 MGD and the following equation:

$$\text{lbs/day} = \text{Concentration (mg/l)} \times \text{Flow (MGD)} \times 8.34$$

The mass load limits for Nitrates and Total Copper were taken from the wasteload allocation assigned to this point source specified in the TMDL reports for Nitrates and Copper. The previous permit contained mass limits for Nitrates and Copper based on the design flow of 7.3 MGD. In accordance with 40 CFR 122.44(d)(1)(vii)(B), the limits in the permit must be consistent with the wasteload allocations specified in the TMDL report. Therefore, the mass limits for Nitrates and Total Copper were revised to be consistent with the wasteload allocation (WLA) set forth in the TMDL reports.

2. 7-day Average Limits:

The 7-day average limits for NH3-N (May through October) as well as CBOD5 and TSS are based on Section 5.4.2 of the Technical Support Document for Water Quality-Based Toxics Control.

$$\text{7-day average limits} = \text{Monthly average limits} \times 1.5 - 2$$

The 7-day average NH3-N limits for the months of November through April are based on the requirements of Reg. 2.512.

The 7-day average limits for FCB are based on Reg. 2.507.

The 7-day average concentration limits for Copper, Zinc, and Mercury are based on the CPP.

3. Ammonia-Nitrogen (NH₃-N):

The water quality effluent limitations for Ammonia are based either on DO-based effluent limits or on toxicity-based standards, whichever are more stringent. The toxicity-based effluent limitations are based on Reg. 2.512 and the CPP.

D. **208 Plan (Water Quality Management Plan)**

The 208 Plan, developed by the ADEQ under provisions of Section 208 of the federal Clean Water Act, is a comprehensive program to work toward achieving federal water goals in Arkansas. The initial 208 Plan, adopted in 1979, provides for annual updates, but can be revised more often if necessary. The 208 Plan has been revised to include a wasteload allocation of 0.45 lb/day for Total Copper which is derived from the Dissolved Copper wasteload allocation as specified in the TMDL report dated November 2003. The 208 Plan has also been updated to revise the NH₃-N limit from 4.0 mg/l to 2.2 mg/l for April–October based on toxicity standards in Reg. 2.512.

E. **Priority Pollutant Scan (PPS)**

ADEQ has reviewed and evaluated the effluent in accordance with the potential toxicity of each analyzed pollutant using the procedures outlined in the Continuing Planning Process (CPP).

The concentration of each pollutant after mixing with the receiving stream was compared to the applicable water quality standards as established in the Arkansas Water Quality Standards (AWQS), Regulation No. 2 (Reg. 2.508) and criteria obtained from the "Quality Criteria for Water, 1986 (Gold Book)".

Under Federal Regulation 40 CFR Part 122.44(d), as adopted by Regulation No. 6, if a discharge poses the reasonable potential to cause or contribute to an exceedance above a water quality standard, the permit must contain an effluent limitation for that pollutant. Effluent limitations for the toxicants listed below have been derived in a manner consistent with the Technical Support Document (TSD) for Water Quality-based Toxics Control (EPA, March 1991), the CPP, and 40 CFR Part 122.45(c).

The following items were used in calculations:

Flow = Q	7.3 MGD = 11.28 cfs	Application
7Q10	0 cfs	U.S.G.S.
TSS	3.0 mg/l	CPP
Hardness as CaCO3	25.0 mg/l	CPP
pH	7.68 s.u.	ARK0067

The following pollutants were reported above the required MQL:

Pollutant	Concentration Reported, $\mu\text{g/l}$	MQL, $\mu\text{g/l}$
Total Copper	39 (highest value of 24 values)	0.5
Total Lead	0.858 (geometric mean of 4 values)	0.5
Total Mercury	0.0115 (geometric mean of 8 values)	0.005
Total Nickel	6.553 (geometric mean of 4 values)	0.5
Total Silver	0.4827 (geometric mean of 4 values)	0.5
Total Zinc	118 (highest value of 60 values)	20
Total Phenols	5.57 (single value reported)	5

ADEQ has determined from the submitted information that the discharge poses the reasonable potential to cause or contribute to an exceedance above a water quality standard as follows:

(a) Aquatic Toxicity

Substance	Concentration (C_e) $\mu\text{g/l}$	$C_e \times 2.13$ (for less than 20 values)	IWC $\mu\text{g/l}$	Water Quality Standards (WQS)	
				Acute, $\mu\text{g/l}$	Chronic, $\mu\text{g/l}$
Total Copper	39	39	39	10.99	8.28
Total Zinc	118	118	118	96.81	88.40
Total Mercury	0.0115	0.0245	0.0245	7.11	0.012

Instream Waste Concentrations (IWC's) have been calculated in the manner described in the CPP.

As can be seen in the table above, the calculated level for the following pollutants are sufficiently higher than the water quality standards. Therefore, the limits for those pollutants are calculated in the manner described in the CPP and are included in the permit as follows:

Final Limits		
Substance	AML, µg/l	DML, µg/l
Total Copper	9.2	18.5
Total Zinc	85.5	171.6
Total Mercury	0.0134	0.0269

14. TOTAL RESIDUAL CHLORINE (TRC) REQUIREMENTS.

Prior to final disposal, the effluent shall contain NO MEASURABLE TRC at any time. NO MEASURABLE will be defined as no detectable concentration of TRC as determined by any approved method established in 40 CFR Part 136 as less than 0.1 mg/l. Thus, the "no measurable TRC concentration" for chlorine becomes the permit limit. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. TRC shall be measured within fifteen (15) minutes of sampling.

15. WHOLE EFFLUENT TOXICITY.

Section 101(a)(3) of the Clean Water Act states that ".....it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited." In addition, ADEQ is required under 40 CFR Part 122.44(d)(1), adopted by reference in Regulation 6, to include conditions as necessary to achieve water quality standards as established under Section 303 of the Clean Water Act. Arkansas has established a narrative criteria which states "toxic materials shall not be present in receiving waters in such quantities as to be toxic to human, animal, plant or aquatic life or to interfere with the normal propagation, growth and survival of aquatic biota."

Whole effluent toxicity (WET) testing is the most direct measure of potential toxicity which incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. It is the national policy of EPA to use bioassays as a measure of toxicity to allow evaluation of the effects of a discharge upon a receiving water (49 Federal Register 9016-9019, March 9, 1984). EPA Region 6 and the State of Arkansas are now implementing the Post Third Round Policy and Strategy established on September 9, 1992, and EPA Region 6 Post-Third Round Whole Effluent Toxicity Testing Frequencies, revised March 13, 2000. Whole effluent toxicity testing of the effluent is thereby required as a condition of this permit to assess potential toxicity. The whole effluent toxicity testing procedures stipulated as a condition of this permit are as follows:

TOXICITY TESTS

FREQUENCY

Chronic WET

Once/quarter

Requirements for measurement frequency are based on the CPP.

Since 7Q10 is less than 100 cfs (ft³/sec) and dilution ratio is less than 100:1, chronic WET testing requirements will be included in the permit.

The calculations for dilution used for chronic WET testing are as follows:

$$\text{Critical dilution (CD)} = (Q_d / (Q_d + Q_b)) \times 100$$

$$Q_d = \text{Design flow} = 7.3 \text{ MGD} = 11.3 \text{ cfs}$$

$$7Q10 = 0 \text{ Cfs}$$

$$Q_b = \text{Background flow} = (0.67) \times 7Q10 = 0 \text{ cfs}$$

$$CD = (11.3) / (11.3 + 0) \times 100 = 100\%$$

Toxicity tests shall be performed in accordance with protocols described in "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", EPA/600/4-91/002, July 1994. A minimum of five effluent dilutions in addition to an appropriate control (0%) are to be used in the toxicity tests. These additional effluent concentrations are 32%, 42%, 56%, 75%, and 100% (See the CPP). The low-flow effluent concentration (critical dilution) is defined as 100% effluent. The requirement for chronic WET tests is based on the magnitude of the facility's discharge with respect to receiving stream flow. The stipulated test species, *Ceriodaphnia dubia* and the Fathead minnow (*Pimephales promelas*) are indigenous to the geographic area of the facility; the use of these is consistent with the requirements of the State water quality standards. The WET testing frequency has been established to provide data representative of the toxic potential of the facility's discharge, in accordance with the regulations promulgated at 40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen conductivity, and alkalinity shall be reported according to EPA/600/4-91/002, July 1994 and shall be submitted as an attachment to the Discharge Monitoring Report (DMR).

This permit may be reopened to require further WET testing studies, Toxicity Reduction Evaluation (TRE) and/or effluent limits if WET testing data submitted to the Department shows toxicity in the permittee's discharge. Modification or revocation of this permit is subject to the provisions of 40 CFR 122.62, as adopted by reference in ADEQ Regulation No. 6. Increased or intensified toxicity testing may also be required in accordance with Section 308 of the Clean Water Act and Section 8-4-201 of the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended).

Administrative Records

The following information summarized toxicity test submitted by the permittee during the term of the current permit at outfall 001:

Permit Number: AR0021768 AFIN: 58-00105 Outfall Number: 001
 Date of Review: 3/9/2010 Reviewer: M. Barnett
 Facility Name: City Corporation - Russellville Water and Sewer System
 Previous Dilution series: 32,42,56,75,100 Proposed Dilution Series: 32,42,56,75,100
 Previous Critical Dilution: 100 Proposed Critical Dilution: 100
 Previous TRE activities: None

Frequency recommendation by species
Pimephales promelas (Fathead minnow): once/quarter
Ceriodaphnia dubia (water flea): once/quarter

TEST DATA SUMMARY

TEST DATE	Vertebrate		Invertebrate	
	Lethal NOEC	Sub-Lethal NOEC	Lethal NOEC	Sub-Lethal NOEC
Jun-05	100	100	100	100
Sep-05	100	100	100	100
Dec-05	100	31*	100	100
Mar-06	100	100	100	100
Jun-06	100	100	100	100
Sep-06	100	100	100	100
Dec-06	100	100	100	100
Mar-07	100	42	100	100
Mar-07	100	100		
Jun-07	100	75*	100	100
Sep-07	100	100	100	100
Dec-07	100	100	100	100
Mar-08	100	100	100	100
Jun-08	100	100	100	100
Sep-08	100	100	100	100
Dec-08	100	100	100	100
Mar-09	100	100	100	100
Jun-09	100	100	100	100
Sep-09	100	100	100	100
Dec-09	100	100	100	100
Mar-10	100	100	100	100

*Pp test passes due to low-PMSD
 Failures are noted in BOLD

REASONABLE POTENTIAL CALCULATIONS

	Vertebrate Lethal	Vertebrate Sub-Lethal	Invertebrate Lethal	Invertebrate Sub-Lethal
Min NOEC Observed	100	42	100	100
TU at Min Observed	1.00	2.38	1.00	1.00
Count	21	21	20	20
Failure Count	0	1	0	0
Mean	1.000	1.066	1.000	1.000
Std. Dev.	0.000	0.301	0.000	0.000
CV	0	0.3	0	0
RPMF	#N/A	1.2	#N/A	#N/A
Reasonable Potential	#N/A	2.857	#N/A	#N/A

PERMIT ACTION

There have been no lethal or sub-lethal failures for *C. dubia* during the past five five years, therefore WET limits are not required.

There have been no lethal failures for *P. promelas* during the past five five years, therefore WET limits are not required.

Although there has been one *P. promelas* sub-lethal WET test below the critical dilution, there is insufficient evidence to support the inclusion of a sub-lethal limit. Additional data is needed to confirm the necessity for a sub-lethal limit, therefore it is not required at this time.

The inclusion of requirements for retests for sub-lethal failures will provide sufficient documentation concerning the necessity for a TRE, and the potential for inclusion of sub-lethal WET limits if appropriate.

P. promelas lethal - WET Monitoring
P. promelas sub-lethal - WET Monitoring
C. dubia lethal - WET Monitoring
C. dubia sub-lethal - WET Monitoring

16. SAMPLE TYPE AND FREQUENCY.

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity [40 CFR Part 122.48(b)] and to ensure compliance with permit limitations [40 CFR Part 122.44(i)(1)].

Requirements for sample type and sampling frequency have been based on the current discharge permit. Sample frequency for the new phosphorus and mercury reporting requirements was set at the same frequency as the existing copper and zinc frequency. The 24-hr composite sample types for CBOD5, TSS, NH3-N, Nitrates, Zinc, and Copper in the previous permit are being changed to composite sample type in this permit to provide the facility more flexibility in gathering a representative composite sample.

Parameter	Previous Permit		Final Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
Flow	once/day	totalizing meter	once/day	totalizing meter
CBOD5	once/weekday	24-hr composite	once/weekday	composite
TSS	once/weekday	24-hr composite	once/weekday	composite
NH3-N	once/weekday	24-hr composite	once/weekday	composite
DO	once/weekday	grab	once/weekday	grab
FCB	once/weekday	grab	once/weekday	grab
TRC	once/weekday	grab	once/weekday	grab
TP	n/a	n/a	once/month	grab
NO ₃ - N	once/weekday	24-hr composite	once/weekday	composite
Zinc	once/month	24-hr composite	once/month	composite
Copper	once/month	24-hr composite	once/month	composite
Mercury	n/a	n/a	once/month	composite
pH	once/weekday	grab	once/weekday	grab

17. STORMWATER REQUIREMENTS

The facility currently has an active industrial stormwater permit (ARR000104) which covers all stormwater runoff at this facility.

18. PERMIT COMPLIANCE.

The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

Compliance is required on the effective date of the permit for all parameters except for Mercury. Final limits for Mercury become effective three (3) years after the effective date of the permit.

The permittee shall submit progress reports addressing the progress towards attaining the final effluent limits for Mercury according to the following schedule:

<u>ACTIVITY</u>	<u>DUE DATE</u>
Progress Report	One (1) year from effective date
Progress Report	Two (2) years from effective date

The permittee has the option to undertake any study deemed necessary to meet the final limitations during the interim period. Any additional treatment must be approved and construction approval granted prior to final installation.

19. MONITORING AND REPORTING.

The applicant is at all times required to monitor the discharge on a regular basis and report the results monthly. The monitoring results will be available to the public.

20. SOURCES.

The following sources were used to prepare the permit:

- A. Application No. AR0021768 received 9/28/2009.
- B. Arkansas Water Quality Management Plan (WQMP).
- C. APCEC Regulation No. 2.
- D. APCEC Regulation No. 3.
- E. APCEC Regulation No. 6.
- F. 40 CFR Parts 122, 125, 133 and 403.
- G. Discharge permit file AR0021768.
- H. Discharge Monitoring Reports (DMRs).
- I. "Arkansas Water Quality Inventory Report 2008 (305B)", ADEQ.
- J. "Low-Flow Characteristics and Regionalization of Low-Flow Characteristics for Selected Streams in Arkansas", 2008, USGS.

- K. Continuing Planning Process (CPP).
- L. Technical Support Document For Water Quality-based Toxic Control.
- M. Region 6 Implementation Guidance for Arkansas Water Quality Standards promulgated at 40 CFR Part 131.36.
- N. Inspection Report dated 4/22/2009.
- O. Consent Administrative Order LIS No. 09-146, effective 12/25/2009.
- P. "Whig Creek Basin TMDL for Copper", November 2003, Parsons.
- Q. "Whig Creek TMDL for Nitrate", December 2000, USEPA.
- R. Site visit conducted on 3/23/2010.

21. POINT OF CONTACT.

For additional information, contact:

Shane Byrum
Permits Branch, Water Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317
Telephone: (501) 682-0618

APPENDIX 9

CREEK CROSSING LIST WITH INSPECTIONS



CREEK CROSSINGS

LOCATION	MH	MH	PIPE SIZE	COMMENTS	CONDITION
1 EAST "L" & UNIVERSITY	1673	1671		8 DUCTILE IRON EXPOSED ABOVE CREEK	GOOD
2 2ND ST. & PHEONIX	1095	1108		8 REPLACED WITH DUCTILE IRON WHEN PHEONIX WAS WIDENED	GOOD
3 EAST CIRCLE DRIVE	1130	1129		12 REPLACED	GOOD
4 400 SOUTH JONESBORO	1159	1151		10 REPLACED WITH DUCTILE IRON	GOOD
5 N OF 10TH LIFT STATION	5006	1535		8 REPLACED	GOOD
6 MUSKOGEE NEAR THE RAILROAD	1012	WEST		6 NEW DUCTILE LINE AND GOES FROM 1012 NOW	GOOD
7 500 BLOCK OF "F" STREET	1737	1641		8 DUCTILE SPANNING CREEK	GOOD
8 300 BLOCK N BOSTON	1567	1617		10 OLD DUCTILE OR STEEL THAT MAY NEED TO BE REPLACED	BAD
9 400 BLOCK N BOSTON	1620	1625		15 UNDER CONCRETE IN BOTTOM OF CREEK	GOOD
10 400 BLOCK N BOSTON	1618	1632		12 UNDER CONCRETE IN BOTTOM OF CREEK	GOOD
11 400 BLOCK N BOSTON	1634	SOUT		6 LINE LOOKS GOOD	GOOD
12 N. OF ERIE & "E" STREET	1737	1636		8 NO CREEK OR DITCH HERE	GOOD
13 500 BLOCK OF "E" STREET	1635	1636		8 BETWEEN ERIE AND DETROIT ON NORTH SIDE OF CREEK	GOOD
14 100 BLOCK OF N. LAREDO	1057	1055		6 CAN'T FIND MANHOLE NUMBERS ON MAP	GOOD
15 DIKE RD	2036	2077		8 CAMERAED LOOKS GOOD	GOOD
16 MAIN AND LOREDO	1070	1071		6 NEEDS CAMERAED	UNK
17 100 BLOCK OF S. LOREDO	1084	1085		18 1084 BURIED IN STREET-LINE GOES BESIDE CREEK	GOOD
18 FARGO & "P" TECH PASTURE	1466	2049		10 WEST OF WEST "O" STREET & NORTH GLENWOOD---CLAY	GOOD
19 E. 16TH 600' E. OF EL MIRA	6294	6295		24 NEEDS CAMERAED	UNK
20 2000 BLOCK OF EL MIRA	6317	6316		24 HAS GOOD CLAY LINE	GOOD
21 PITTSBURG CIRCLE	6153	6152		36 HAS NEW 36" PVC ENCASED WITH CONCRETE	GOOD
22 PITTSBURG CIRCLE	6153	6131		15 NEEDS CAMERAED	UNK
23 PITTSBURG & ALEWINE ON 17	6133	6134		10 6340 NOT NUMBERED	GOOD
24 200 BLOCK OF E. 16TH	6073	6082		10 LINE IS UNDER GARAGE AREA OF CM VENDING	GOOD
25 EAST 16TH ST. & ITHICA	6066	6067		8 NEEDS CAMERAED	UNK
26 6TH & ARKANSAS	1526	1522		6 UNDER CENTER OF STATE HIGHWAY S. ARKANSAS	GOOD
27 800 BLOCK OF 8TH STREET	1238	1242		8 NEED MORE INFO	UNK
28 12TH ST. & MUSKOGEE	1257	1258		8 NEEDS REPLACED FROM 1257 TO 1242.	BAD
29 WEST MAIN & MODESTO	3109	3067		AL 3090 TO 3089-NEEDS CAMERAED	UNK
30 100 BLOCK OF EAST 6TH STREET	1539	1540		8 NUMBERS DO NOT MATCH	UNK
31 11TH ST. & BOSTON AVE.	5032	WEST		6 REPAIRED	GOOD
32 105 EAST 8TH ST.	1537	WEST		6 NUMBERS DO NOT MATCH	UNK

CREEK CROSSINGS

33	100 BLOCK OF EAST 8TH ST.	1536	SOUT
34	10TH ST. & DENVER	5013	5124
35	12TH ST. & MUSKOGEE	1264	1265
36	MAIN ST. LIFT STATION	4000	4001
37	10TH ST. LIFT STATION	5007	STATI
38	OMAHA & SECOND	1091	1094
39	OMAHA & SECOND	1092	1095
40	2ND PLACE & MUSKOGEE	1120	1119
41	900 BLOCK OF E. "J"	1653	1152
42	2ND & UTAH	1115	SOUT
43	2ND & UTAH	1115	1114
44	412 N. JOPLIN	3076	3077
45	900 BLOCK OF E. "J"	1653	1654
46	"H" ST. IN ADJOINING FIELDS	1648	1649
47	NEAR HARTFORD & EAST "H"	1646	1647
48	"G" & GREENWICH	1725	1642
49	LOUISVILLE & UNIVERSITY	1655	1659
50	EAST CIRCLE DRIVE	1128	2104
51	100 BLOCK S. LOREDØ	1085	1128
52	WEST "C" ST. & MUSKOGEE	1030	1031
53	EAST OF EL PASO	1826	1824
54	100 BLOCK EAST "D"	1621	1619
55	"B" ST. & GREENWICH	4002	1605
56	"B" ST. & GREENWICH	2064	2065
57	"B" ST. & GREENWICH	4007	4033
58	KNOXVILLE & "C" ST.	4027	EST&
59	710 N. EL PASO	1827	1826
60	PRAIRIE ST. BOOSTER STATION	1818	1000
61	BEHIND TYSON HATCHERY	6289	6290
62	NORTH OF THE RAILROAD	6289	6269
63	NEAR TYSON HATCHERY	6291	6290
64	INTERSECTION HWY 324	6266	6261
65	TYSON HATCHERY	6292	6293
66	100 BLOCK SOUTH MUSKOGEE	1089	1088

8	HAS DUCTILE	GOOD
8	NEEDS CAMERAED	UNK
8	NEEDS CAMERAED	UNK
18	TOO MUCH FLOW	UNK
8	REPLACED WITH NEW LIFT STATION	GOOD
8	UNDER CONCRETE IN BOTTOM OF CREEK	UNK
15	UNDER CONCRETE IN BOTTOM OF CREEK	UNK
12	NEEDS CAMERAED	UNK
	UNDER CONCRETE IN CREEK AND WAS VIDEOED BEFORE CONSTRUCTION	UNK
6	CAMERAED LOOKS GOOD	GOOD
8	CAMERAED LOOKS GOOD	GOOD
12	UNDER STREET--NEEDS 3077-3079 & 3077-3078	UNK
8	CAMERAED LOOKS GOOD	GOOD
8	NUMBERS DO NOT MATCH	UNK
6	LOOKS GOOD	GOOD
8	VERY BAD IN NEED OF REPLACEMENT	BAD
8	1655-1660	UNK
12	DOES NOT NEED REPLACING	GOOD
12	RUNS BESIDE CREEK AT KROGER - WEST MAIN	UNK
15	HAS CAST IRON OR DUCTILE	UNK
18	NOT SURE	UNK
6	DUCTILE EXPOSED UNDER BRIDGE	UNK
18	OVER FLOW LINE FOR PRAIRIE CREEK	UNK
10	UNDER CONSTRUCTION	GOOD
10	UNDER CONSTRUCTION	GOOD
15	NEW DUCTILE ACROSS CREEK	GOOD
18	BEEN RENEWED	UNK
15	TOO MUCH FLOW	UNK
24	RIGHT OF WAY NEEDS CLEARED	UNK
18	RIGHT OF WAY NEEDS CLEARED	UNK
24	RIGHT OF WAY NEEDS CLEARED	UNK
8	NUMBERS DO NOT MATCH	UNK
24	RIGHT OF WAY NEEDS CLEARED	UNK
15	NOT LIKE SHOWN ON MAP	UNK

CREEK CROSSINGS

67	NORTH OF THE RAILROAD	6268	6267
68	TYLOR RD.	6270	6331
69	1700 EL PASO	5065	5067
70	1600 S. COMMERCE	5062	5029
71	10TH & DENVER	5014	5013
72	800 4TH PLACE	1162	1158
73	S. LOREDO MEADOWVIEW	1257	1242
74	FIELD S. OF HONEYSUCKLE	2101	2100
75	WEST 12TH & ARLINGTON	2115	2114
76	BRADLEY LANE & VANCOUVER	????	????
77	3RD CT. & VANCOUVER	1315	1332
78	S. ARK & 2ND ST.	1494	1495
79	KNOXVILLE & 16TH ST.	6073	6071
80	8TH & GLENNWOOD	1229	1232
81	4TH PL. & HOUSTON PL.	1163	1214
82	100 BLOCK S. MUSKOGEE	1087	1091
83	MAIN ST. & MUSKOGEE	1087	1072
84	18TH & COMMERCE	5069	5065
85	AREA IN 100 BLOCK N. ARK.	????	????
86	200 WEST 13TH	5019	5021
87	WEST "T" & N. GLENNWOOD	2044	2046

18	RIGHT OF WAY NEEDS CLEARED	UNK
10	NEEDS CAMERAED	UNK
8	NEEDS CAMERAED	UNK
6	NEEDS CAMERAED	UNK
12	IN STREET UNDER BRIDGE	UNK
8	RUNS BESIDE CREEK AT KROGER - WEST MAIN	UNK
8	NEEDS REPLACED FROM 1257 TO 1242	BAD
10	NEW PVC SOUTH WACO BETWEEN W. 7TH & W. 8TH	GOOD
10	PVC	GOOD
10	1316-SOUTH	UNK
10	NEEDS CAMERAED	UNK
8	IN ALLEY BETWEEN BOULDER AND ARKANSAS	UNK
15	UNDER MIDDLE OF 16TH ST. EAST OF KNOXVILLE	UNK
6	NEW MAIN	GOOD
10	NEEDS REPLACED ON JAMES PARK SIDE OF CREEK	BAD
8	NEEDS CAMERAED	UNK
12	TOO MUCH FLOW	UNK
6	NEEDS CAMERAED	UNK
??	BEHIND ROBERSON AUCTION	UNK
8	NEEDS REPLACED	BAD
10	CREEK IS BETWEEN 2044 & 2043 CLAY LINE	UNK

APPENDIX 10

CUSTOMER COMPLAINT FORM





Customer Comment/Complaint Form

Date: _____

Time: _____

Customer Name: _____

Customer Address: _____

Phone Number: _____

Best time to contact customer: _____

Comment/Complaint: _____

For a complaint, choose an item from the following list that best describes the problem:

- Odor Discolored Bad Taste
Particles Low Pressure Other: _____

Describe/Explain item selected: _____

Mail form to: City Corporation, PO Box 3186, Russellville, AR 72811-3186

A written response will be submitted within 10 business days from date received from customer.

FOR OFFICE USE ONLY:

Completed by: _____

Received by: _____ Date: _____ Time: _____

APPENDIX 11

EFFLUENT FLOW SPREADSHEET



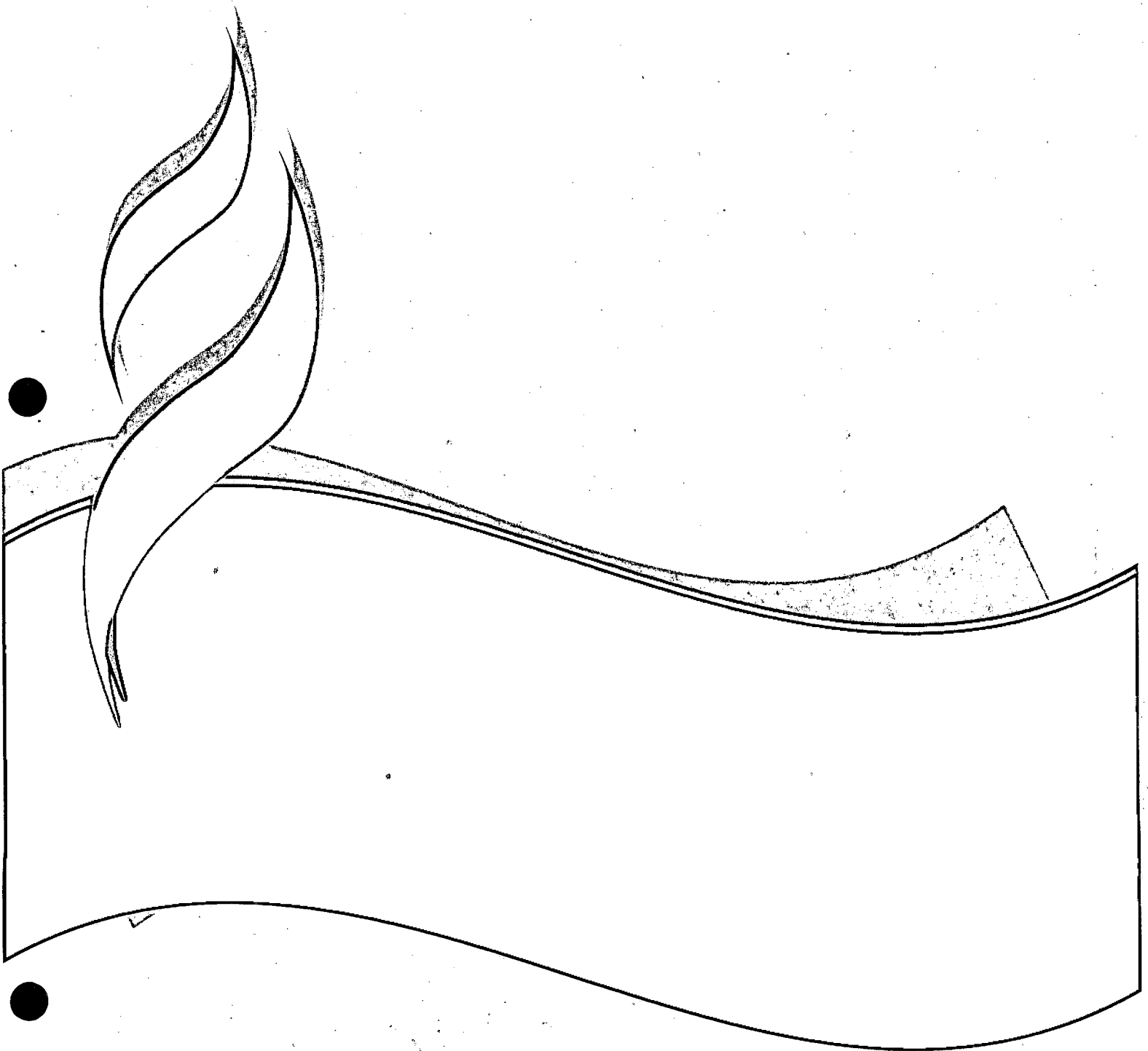
Effluent Flow

1 Effluent flow

Date	Jan 2012	Feb 2012	Mar 2012	Apr 2012	May 2012	Jun 2012	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012	Dec 2012
1	6.537	6.733	6.443	7.082	4.643	4.200	3.892	4.315	5.852	4.132	4.045	4.660
2	6.733	6.505	6.584	6.792	4.865	4.242	3.276	4.127	4.025	4.612	4.027	4.116
3	6.787	6.306	6.818	6.209	4.813	3.445	4.077	4.619	3.591	4.256	4.245	4.228
4	7.082	9.379	6.394	7.330	4.658	3.932	4.146	4.196	3.646	4.569	3.882	4.893
5	5.632	7.339	5.556	7.568	5.428	4.741	3.492	3.983	4.613	4.595	3.395	5.990
6	6.847	7.277	5.481	6.987	3.981	4.183	4.046	3.544	4.514	4.572	4.766	5.326
7	7.023	7.099	5.033	6.009	3.866	4.187	4.052	4.231	4.691	4.151	4.052	5.572
8	7.028	7.074	5.953	6.470	4.644	4.077	4.069	4.281	5.139	3.682	4.017	5.331
9	6.621	6.918	13.857	6.698	4.490	3.890	3.471	4.147	4.350	4.460	4.140	5.006
10	7.070	6.448	7.826	6.568	3.897	3.743	4.466	4.191	3.983	4.336	4.113	4.275
11	7.167	7.045	7.095	6.657	3.913	3.333	5.089	4.027	4.318	4.033	3.725	4.737
12	7.142	6.879	10.614	6.848	3.962	4.243	4.323	3.777	4.363	4.645	5.042	4.305
13	7.108	6.477	10.872	7.122	3.833	4.621	4.246	3.756	4.126	4.826	4.495	4.352
14	7.017	6.825	10.042	6.981	3.475	4.257	4.026	4.318	3.599	5.093	4.437	4.510
15	7.128	7.202	8.916	6.856	4.290	4.204	3.809	4.065	5.580	5.355	4.426	4.442
16	7.211	7.149	8.381	7.240	4.242	4.357	3.433	4.239	6.595	4.923	4.595	4.299
17	7.118	7.082	7.600	7.088	4.034	3.652	4.328	5.986	6.606	4.708	4.232	4.149
18	6.942	7.063	6.986	6.590	4.094	3.319	4.274	5.031	7.071	4.878	3.802	4.629
19	6.114	6.703	7.064	5.799	4.061	4.164	4.110	4.287	5.746	4.537	3.922	4.389
20	6.291	6.482	6.393	5.940	3.698	4.259	4.069	4.340	5.976	3.892	4.683	4.848
21	5.443	7.017	12.180	6.233	3.497	4.029	3.739	4.534	6.243	3.807	4.632	4.848
22	4.909	6.462	17.995	6.678	4.179	4.050	3.591	4.461	4.724	3.885	4.456	4.941
23	5.115	7.097	15.407	5.999	4.165	3.743	3.569	4.289	3.860	4.736	3.806	4.185
24	5.112	6.365	13.204	6.128	3.934	3.659	4.065	4.342	3.678	4.310	3.786	3.868
25	6.095	6.478	9.878	5.244	4.030	3.133	4.189	4.302	4.599	4.460	3.817	3.592
26	10.951	6.568	8.085	5.044	3.735	4.137	4.100	3.971	4.614	4.822	4.187	4.882
27	7.357	6.813	8.647	4.928	3.353	4.031	4.996	3.866	4.477	4.713	4.875	5.594
28	7.349	7.149	7.814	4.642	3.107	4.135	4.397	4.783	5.608	4.138	4.687	5.221
29	7.146	7.000	7.306	4.254	3.403	4.288	4.180	4.358	5.182	3.627	4.584	6.925
30	6.797		6.689	4.111	4.199	4.197	3.541	4.536	4.428	3.897	4.886	5.680
31	6.825		7.128		4.046		4.047	5.335		4.137		4.974
Minimum	4.909	6.306	5.033	4.111	3.107	3.133	3.276	3.544	3.591	3.627	3.395	3.592
Maximum	10.951	9.379	17.995	7.568	5.428	4.741	5.089	5.986	7.071	5.355	5.042	6.925
Total	209.697	200.934	268.241	188.095	126.535	120.451	125.108	134.237	145.797	136.787	127.757	148.767
Average	6.764	6.929	8.653	6.270	4.082	4.015	4.036	4.330	4.860	4.412	4.259	4.799

APPENDIX 12

NEWSPAPER ADS AND ARTICLES FOR 2012



[print](#)

City Corp. names officers

by Whitney Snipes

01.19.12 - 12:00 pm

The City Corp. board of directors elected officers for 2012 at its meeting Tuesday.

Tommy Richardson will serve as chairman, Don Guess as vice chairman and Art Jones as secretary. The board also introduced freshman board member Luke Duffield and honored outgoing chairman Dave Palfreeman for his years of service to the board. Richardson presented Palfreeman, who served on the board from 200-2011, with a commemorative plaque.

"I love and appreciate every one of you, and it's been a joy to serve," Palfreeman said.

Also on Tuesday, General Manager Craig Noble applauded City Corp. staff for a quick response to address a large leak on a 12-inch water line on Sunday.

"I want to commend the staff," he said. "They got together, came up with a plan."

He said the problem was mitigated due to "the devotion of these people — of all the team members on that project."

In other business, board members received an update on the design process for improvement to the utility's wastewater treatment facility. Craig Johnson of CDM Smith said a kickoff meeting took place last week and a design plan developed. Surveying for the project is being completed this week, and other geotechnical work will be conducted this month.

The design for improvements will 100 percent complete by June 27, Johnson said. After that, the plan will be submitted to the Arkansas Department of Environmental Quality (ADEQ) for review, a process which he said could take five to eight months. Johnson said he expected a project start date in January or February 2013.

A complete timeline for design, construction and finance — \$8.5 million in bonds are expected to be issued to pay for the improvements to the facility — will be developed and presented to both the board and representatives from the city of Russellville, Noble said.

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City Corp. discusses sludge options, street project

by Preston Tolliver

02.23.12 - 12:00 pm

The City Corp. Board of Directors will look for a new area to deposit sludge after it was informed at its regular meeting Tuesday that a local property owner decided they will no longer receive it after this year.

City Corp. general manager Craig Noble said the sludge — a byproduct of the settling process at the wastewater treatment plant — is distributed to permitted sites to be land-applied.

“It’s used mostly for hay production or cattle farming,” Noble said. “The benefit is, it’s a natural fertilizer, so it promotes very aggressive hay production.”

Chairman Tommy Richardson was positive a new site will be found.

“There is no problem with getting rid of this stuff,” he said.

Civil engineer Clint Bell discussed with the board a project that will give more sewer capacity on East 2nd Street. The project will aim to cut down on inflow and infiltration and is expected to be ready to bid in early March.

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Investment in the future

by Heather Sprinkle
03.28.12 - 12:00 pm



City Corporation is scheduled to begin the first part of a 10-year wastewater construction project in September 2012.

A Consent Administrative Order (CAO) issued to City Corp. by the Arkansas Department of Environmental Quality (ADEQ) mandated specific improvements and

repairs needed to be made to its sewer collection system.

“The CAO comes from ADEQ, but is enforced federally through the EPA,” Craig Noble, general manager, said. “The CAO is like a prescription for our waste treatment facility to ensure the highest standards for our customers and the environment.”

The CAO included three stages of development at a projected cost of \$35 million to be funded by City Corp.

Approximately \$9 million of the cost is for construction of new treatment facilities to comply with new EPA standards involving treatment of nitrates, total residual chlorine and total suspended solids (TSS) levels in wastewater. City Corporation included an additional component to treat the phosphorus levels also in anticipation for future mandates.

“It just makes more sense to include a component for phosphorus now,” Noble said. “Instead of waiting and incurring additional expenses and construction in the near future.”

Nitrates are essential plant nutrients, but in excess amounts they can cause significant water quality problems, including hypoxia or low levels of dissolved oxygen.

“There is a portion the size of Connecticut in the Gulf of Mexico that suffers from hypoxia,” Noble said. “All the water that flows into the Arkansas and Mississippi Rivers ends up in the Gulf of Mexico. The EPA is enforcing stricter standards for waste water treatment plants to ensure less damage is done to areas like that.”

The nitrates enter the water supply several ways, including agriculturally and industrially through fertilizers, pesticides and chemicals.

The new treatment facilities will reduce levels of chlorine, nitrates and phosphorus through the use of biological processes.

Noble said the projected cost will be funded internally with no expected rate increases.

"The [Russellville] City Council approved a resolution, that when the time comes, \$9 million of bonds will be sold," Noble said. "We can fund those annual payments from our current client revenue. The money for the inflow and infiltration project will need to come from an additional source. We don't want to pass that expense in the form of rate increases to our customers."

City Corp. has operated self-sufficiently since December 2002, when the most recent sales tax expired.

"In that time we've had three gradual rate increases beginning in 2008," Noble said. "Those were the first rate increases in almost 20 years."

More than \$25 million of the projected cost stems from line rehabilitation for 200 miles of sewer pipes in the city of Russellville.

"Portions of our pipe system are a 100-year-old system," Noble said. "We still have clay pipes in use and we all know what happens to clay when buried. We plan to use a technique called pipe bursting where feasible, which will make the process less invasive for the public."

Pipe bursting is a method of replacing buried pipelines without the need for a traditional construction trenches. Noble said the clay pipes will burst and high density polyethylene pipes will be pulled in behind.

"We want the transition to be as easy on the public as possible," Noble said. "There will be some areas where trenching will be necessary."

Noble anticipates approximately \$2.2 million of the pipe project will begin in September. Noble said the system is divided into 28 subbasins and three basins are being investigated each year.

The repair and replacement of the pipes is a 10-year project that will end in March of 2022.

Noble said City Corp. will maintain a 30-percent inflow and infiltration rate, meaning the treatment facility can accept 30 percent of additional water coming in during storm events.

"If we made the system is any tighter," Noble said. "It wouldn't be cost effective for our users."

The construction phase for treatment is currently in design, and City Corp. anticipated applying to ADEQ for approval on Aug. 1, 2012.

Noble said if ADEQ approves the plan as is in February 2013, construction would begin in April 2013 and take one year to complete.

"It would be May 2014 before the new systems are working," Noble said. "We have been in compliance with every milestone thus far either ahead of schedule, or by the target date. I really want the people to understand these projects are mandated by the federal government and we are already in the beginning phase of repairing and replacing pipes. The funding has to come from somewhere, and I don't want the public to feel blindsided at a later date. Now is the time to begin planning for the costs."

Arkansas River Valley Alliance for Economic Development president Jeff Pipkin said the operation, management and quality of the city's waste treatment facility is important to potential industry.

"Every single perspective employer that I visit with asks me what Russellville's excess water treatment capacity and the excess treatment capacity of the sewer system are," Pipkin said. "If we don't have enough excess capacity, they no longer consider us as a viable option. It is important for executives to see that our utilities are managed well and updating our system to meet EPA requirements would be critical."

Pipkin echoed Noble's concerns about additional funding for the repairing and replacement of sewage pipes.

"Based on the amount of the money we're talking about, you're obviously not going to be able to recoup that kind of money through ratepayers," Pipkin said. "A large portion will need to come from a city-wide sales tax, similar to the one that passed to build the Huckleberry reservoir. This project is part of the basic infrastructure of our community and needs to be done to protect our citizens and the environment."

Noble said after the pipes are repaired and replaced, residents will notice a decrease in overflow coming from manholes during storms.

"Residents are still going to receive a high level of service," Noble said. "And we will have a much better and up-to-date system."

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Show me the money

by Heather Sprinkle
03.29.12 - 12:00 pm



City Corp. has a \$35 million dollar, multifaceted sewer project expected to be completed by March 2022 to fund.

Where will the money come from?

Russellville's water utility is divided into two sub-categories or enterprise funds — water and wastewater

(sewer). Revenue for the water division stems from rates, water usage, selling water to other cities and permit fees. Revenue for the wastewater division comes from customer rates, dumping and new connections.

In 2011, City Corp. sold 698.8 million gallons of water, amounting to \$966,784.

Tri-County Regional Water Distribution District is the biggest customer, purchasing \$877,000 of water and the remaining \$90,637 in sales is divided between Dover, London, Atkins and the Russellville Improvement District.

"Our contract with City Corp. is tied directly to the water system side," Tri-County Regional general manager John Choate said. "Our rate is based on the cost to produce water, and the wastewater construction projects shouldn't affect the rates of our customers."

Total revenue from water in 2011 for City Corp. was \$5,754,331. After expenses, the net profit was \$1.1 million for the fiscal year. Total revenue from waste water in 2011 for City Corp. was \$3,917,390. After expenses, the net loss was \$263,230 for the fiscal year.

City Corp. is a not-for-profit business, meaning all profit goes back into the company to fund capital improvements and for operation and maintenance. Funds are designated as restricted or unrestricted and have specific uses.

"We don't issue dividends or pay stockholders," City Corp. general manager Craig Noble said. "City Corp. is not in business to make money. We provide a needed service to the community. We set aside money each month in accounts for water and wastewater that can only be used for operation and maintenance. The account would show a positive balance, but the funds are restricted and cannot be used for new construction."

Noble said co-mingling of the funds between the two enterprise funds are not allowed.

"We only have one bank account," Noble said. "But there are specific accounting codes that designate what percentage of each category belongs to water and wastewater. We do not use income from the water side to pay for anything

wastewater related.”

City Corp. has increased rates for both water and wastewater three times since 2008.

“Even with the rate increases, our water rates are lower now than they were in 1989,” Noble said.

City Corp. received a portion of the 1-cent sales tax from 1992 until 2002. Noble said revenue from that sales tax helped keep rates lower because of the additional source of income.

The 10-year, \$35 million dollar project is divided into two phases — a construction project ending in 2016 regarding new EPA treatment standards and a line repair and replacement project ending in 2022.

Noble said the \$9 million treatment project will be funded in-house with current revenue and the selling of bonds.

“The Russellville City Council approved a resolution to sell \$9 million of bonds when the time comes,” Noble said. “We anticipate paying that back over 20 years with interest.”

Repair and replacement of 200 miles of sewer lines make up the bulk of the project, and the first \$2.2 million of construction begins in September.

Noble said portions of the sewer system are 100 years old and some pipes in place are still clay. After the pipes are repaired and replaced, residents will notice a decrease in overflow coming from manholes during storms.

“People don’t really think about the sewer system until there is a problem,” Noble said. “It’s my job to ensure there are as few problems as possible and to comply with the standards of the federal government.”

The treatment construction and line project was mandated by Arkansas Department of Environmental Quality and the Consent Administrative Order (CAO) was agreed upon in 2009 and is enforced federally by the EPA.

Noble said EPA standards for wastewater treatment processing area constantly changing and compliance is mandatory.

“The EPA doesn’t care how big we are or how much money we have to pay for these updates,” Noble said. “All they care about is whether or not the work is done.”

According to the CAO, City Corp. has until 2016 to complete construction for the new treatment systems and pipe repair and replacement must be finished by March 2022.

Noble said City Corp. began investigating and improving in accordance to the

CAO in 2010 and is on schedule to complete both projects on time.

"These are our deadlines and we must comply," Noble said. "We can be fined up to \$10,500 per day per violation each day we are not in compliance. It's really not a question of do we want to do this? It is a matter of getting it done. We plan to begin with the East Second Street project in September, which is 20,000 linear feet of pipe. That will allow us to meet our deadline."

Noble said City Corp. is financially sound to begin the \$2.2 million project in September, but will continue to look for external sources of funding.

"Right now, we are OK," Noble said. "When the time comes, if we need to sale additional bonds, we'll pursue that. We hope that in the slow economy our construction bids will come in lower than the estimate and allow us to save money that way. Regardless of how we fund it, it has to begin."

Noble said City Corp., in conjunction with the Russellville City Council, is still in the investigative phase searching for the most efficient way to fund the long-term improvement plan.

"This project is jointly moving forward," Noble said. "We will need additional funding in the future. It's just a matter of will it come from bonds, sales tax, rate increases or a combination. We don't qualify for grants because Russellville is classified as a first class city."

Noble said a rate increase would not be large and hopes to maintain customer and city support throughout this 10-year process.

"Nobody wants rate increases," Noble said. "Our customers don't and we don't. We are looking at evaluating our existing rates every two years instead of waiting like we did last time. That would mean a two or three percent increase instead of 20 or 30 percent increase."

Noble said City Corp. has also been looking at ways to make daily operations more efficient.

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Wastewater is on everyone's mind

by Heather Sprinkle

03.30.12 - 01:52 pm

Russellville Mayor Bill Eaton said City Corp. and the Russellville City Council are looking at several options to fund the \$35 million sewer project, including asking the voters to extend the one-cent sales tax which sunsets in 2013.

“We (the Russellville City Council) are in concurrence with what Mr. Noble said, as far as what is going to be done to finance the project,” Eaton said. “We’re looking at engaging or hiring a company to deal with the bond issue. The second option is asking the public to consider renewing the one-cent sales tax and possibly incorporating the wastewater project as one of the recipients designated to receive funds for a length of time.”

Eaton said if renewed, he would like to see the one-cent sales tax fund several initiatives including downtown improvements, street, drainage and recreation projects. At various public meetings in the past three months, residents have expressed interest for including components from the Walker Collaborative Master Plan into the infrastructure of the city and the construction of an aquatic center.

“How we package things in the future will depend on what we wind up with in the next 10 years,” Eaton said. “We have to be careful to meet the expectations of the public and have money to improve and maintain the wastewater system of Russellville.”

Improvements and maintenance — both are key components of a healthy wastewater system.

The current 10-year wastewater project comes on the heels of Consent Administrative Order (CAO) issued in 2009 from Arkansas Department of Environmental Quality (ADEQ) and enforced by the EPA. The most current CAO deals with violations and maintenance issues dating back to 1998.

Craig Noble became the General Manager for City Corp. in July 2004.

“I can’t do anything about the conditions prior to 2004,” Noble said. “I can only comment on the improvements made since then. A plan to get a permit to discharge into the Arkansas River began in 1998 and died on multiple occasions. In 2008, we had a permit from ADEQ to move forward with the pipeline project that would have made City Corp. in compliance with nitrate levels.”

The pipeline project came to a halt after a lawsuit was filed by the city of Dardanelle and ADEQ mandated City Corp. design an alternative solution to comply with acceptable nitrate levels mandated by the EPA. Currently the discharge flows into Whig Creek, which flows into the Arkansas River.

“If someone looked at the discharge flow,” Noble said, “he or she would never know it was water treated at a wastewater facility. It is clear and pristine. We are

not in the business of polluting the environment, we want to protect our natural resources for our families.”

Eaton said streets, drainage, nitrates, wastewater and a possible aquatic center would be a benefit from the renewal of the one-cent sales tax. Can the city of Russellville fund all these projects?

“I think we do if we look at it all wisely and come up with the best options,” Eaton said.

“To what scale on each one is probably where we’ll have to look very seriously and make some decisions.”

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Russellville, City Corp. remain at stalemate

by Preston Tolliver

04.18.12 - 08:54 pm

The Russellville Finance Committee will continue discussion regarding a lease agreement with City Corp. at its regular meeting Thursday after talks between the two boards Wednesday failed to reach any resolution.

Alderman Martin Irwin proposed amendments to the utility's lease which would require duties and responsibilities — such as the maintenance of a permanent inflow and infiltration crew or a sufficient lab crew — to be handled by both entities.

City Corp. Director Tommy Richardson said the utility is against any amendments to the lease, as it would introduce politics to City Corp.'s functions.

"I'm not sure if we're closer to an agreement on this or not," Richardson said. "The board is opposed to putting politics back into a municipal utility, and if we alter the lease that opens an avenue in the future for putting politics into the utility. Primarily, that is the reason the board is opposed to the amendments."

As of May 23, the current lease will have been in place for 27 years, Richardson said.

Irwin said he didn't feel any progress was made at Wednesday's meeting.

"Their position has been rigid and unmoving that there was going to be no change to this lease," he said. "There is nothing specific in (the current) lease. There's no circumstance in which we can take action for cause."

Irwin said since the city council objected to the renewal of the city's lease with City Corp. in June, the utility has made strides to better its image, but said he fears if the lease isn't amended, previous patterns may re-emerge.

The finance committee will address the lease issue at 5:30 Thursday in the City Hall Council Chambers.

For further information on the lease issue, see Friday's issue of The Courier.

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Sludge to soon need new resting place

by Preston Tolliver

04.18.12 - 12:00 pm

The City Corp. Board of Directors is continuing its consideration of where to deposit sludge after the board was informed at its February meeting that a local property owner decided it will no longer receive it after January 2013.

“The utility will make a decision after we look at the environmental standpoint, the environmental outcomes and the economics,” City Corp. general manager Craig Noble said. “And we’re just going to look at all the options.”

Noble said the sludge — a byproduct of the settling process at the wastewater treatment plant — is currently distributed primarily between two sites — a 38-acre property owned by City Corp. and a private property that accounts for 68 acres.

Noble said 218.4 dry tons of sludge was produced in 2011. Each ton cost approximately \$340 through the process of getting it ready to be picked up and land-applied.

“With the 38 acres we currently own, that won’t assimilate the volume of sludge we generate,” he said.

Noble said currently, the plants generate class B sludge, which is used primarily for hay production or cattle farming. The sludge can be applied to only dry ground and the owner of the property can’t do anything with it for 30 days, he said.

“It grows good grasses and good hay, and grows them quick,” he said.

He said the company will research the option of producing class A sludge instead — an option that would cost about \$4 million.

Class A sludge may be used in yards or flower gardens, he said.

Among other options the utility will consider are to landfill the sludge or purchase land to landfill it, or to bid the sludge to someone who may apply it to a field.

“We have to evaluate those options and make a decision early enough to allow us to walk away from this property in January 2013,” Noble said.

In other business, the board voted to award a \$13,835 contract to Lawnsapes of the River Valley for services and the pump station and water tank sites for the next year. The board also voted to modify the document, allowing the contract to be renewable on an annual basis for three more years.

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City Corp opens bids for three projects

by Preston Tolliver

05.16.12 - 12:00 pm

City Corp. accepted a motion to open bids for three projects during its regular meeting Tuesday and will submit them for review and finalization at a meeting next month.

The projects, each of which received only one bid, are the purchase and installation of an IBM Power 7 computer; the installation of a new telephone system for the city's water utility; and the purchase and installation of fire hydrants throughout the city.

For the Power 7 computer, which will provide a server disaster recovery functions for the utility, City Corp. received a bid from Arkansas Data Services (ADS) on April 17 of \$107,477. ADS, a Conway-based IBM business partner, has been City Corp.'s IT provider since 1993, according to City Corp. Manager Craig Noble.

"They're the ones who have provided all our mid-range computers in the past," Noble said.

City Corp. received a bid on the telephone system from Service Plus Telecommunications of Russellville on April 23 of \$36,410.64.

Russellville Mayor Bill Eaton commended Service Plus, who in the past year installed a telephone system for city departments, saying the telecommunication company has always been quick to address any issues.

"We've been very pleased with the installation and operation of the equipment," Eaton said. "The only problems that we've had, we've created ourselves, so it's been very good."

Russellville-based River Valley Winwater Works Co. placed a bid of \$24,017.02 to install 15 fire hydrants in the city.

The City Corp. board of directors will meet again June 19.

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Amid cost concerns, City Corp. to re-evaluate 2nd Street plans

by Preston Tolliver
07.18.12 - 11:00 am

Wastewater improvements on East 2nd Street are going to be re-evaluated after the only two bids for the project were considerably higher than the contractor's estimate and what the utility budgeted for the project.

The project, which is planned to give more sewer capacity on the street while cutting down on inflow and infiltration, was estimated by contractor Clint W. Bell with CWB Engineers, Inc. to cost approximately \$2.5 million. Two bids were accepted July 10 — the lower being from Building and Utility Contractors out of Redfield for \$3,431,288 and the other a \$4,049,027 estimate from Heller Company Inc., of Hot Springs.

"The bids came in extremely high. I think there's several reasons for that," Bell said, citing plans in the project that call for pipe bursting projects — something that few contractors in the state specialize in, he said.

"These numbers are high, and they're above the funds available for this project that was budgeted, and I think that's the key thing," he said. "We need to re-evaluate this."

Bell suggested splitting the project into two separate bids and reconsidering the pipe burst plans. Bell said he expects the engineering firm to have plans ready to re-bid in about a month.

Board member Larry Collins said since the utility issued a voluntary water advisory for its customers on July 10, the utility has seen between 7.5 to 10 million gallons of water used per day, down from the 10.5-12.5 million used per day between July 1-7, when the area saw record heat.

"We're in really good shape," Collins said. "With the showers we've had and everything, we're doing OK."

While water usage is down, the board agreed the water advisory should stay in place.

Russellville Mayor Bill Eaton commended residents of Russellville for their response to the advisory.

"I think our citizens have responded positively to the measures that were suggested, beyond just suggestion," he said. "I'm glad they've used restraint and it's paid off in a good way for us."

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City Corp. GM finalist for Rogers job

by [Heather Sprinkle](#)

08.14.12 - 11:00 am

Craig Noble, the general manager for City Corporation, confirmed to The Courier Monday that he is one of four finalists for a job at the city water utility in Rogers.

Noble said he has not been offered the superintendent's job.

Noble said he did not actively seek alternative employment, but rather, he was sought out for the position.

"I was honored to be contacted about the job and then even more honored when I was one of eight finalists," Noble said of how he came to apply for the job.

"Now, I am one of four finalists for the position and even more honored. I enjoy my job in Russellville and the community."

Noble said a potential job offer in Rogers would be what he would categorized as a win, win, lose situation for him.

"Professionally this would be an advance for me. The Rogers Water Utility has three times the service connections that City Corp. has," Noble said of the advantages of the potential new job. "Personally, my wife and I would both be closer to our aging parents, whom we would like to be closer to for medical reasons. I also have a son in the Fayetteville area and would enjoy living closer to him. The minus would be leaving Russellville, a town I've grown to love since accepting my job at City Corp. in 2003."

Noble said he notified the City Corp. board of directors about the interest Rogers has shown in him.

"They don't want me to leave, but they also understand that this an opportunity for me professionally and don't want to stand in my way," Noble said. "If I were offered the job, it would be a difficult decision to make. There are a lot of unfinished items that are still ahead for City Corp. that I have a role in. I would like to be here to see those come to fruition. It is a decision I would have to weigh heavily."

Noble said also a contributing factor that would weigh-in on his decision to stay or go, is his loyalty to his employer, the residents of Russellville and the staff at City Corp.

"We have an outstanding team at City Corp. and that would be tough to leave," Noble said. "I just can't stress that enough. I enjoy being a part of City Corp. and I am so thankful I work with such an amazing team."

Joyce Johnson, the interim superintendent for the Rogers utility, confirmed Monday that Noble is one of four finalists and that the board met again on Aug. 6, but no decision was made.

"There has not been a vote," Johnson said. "The board is still reviewing the background checks and gathering reference materials."

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City Corp. general manager moving on

by [Heather Sprinkle](#)

08.25.12 - 11:00 am

Russellville City Corporation is looking for a new general manager after Craig Noble tendered his resignation Friday to corporation leaders.

After nine years of serving as the general manager for City Corporation in Russellville, Noble will report for his first day of work on Sept. 24 as the new general manager for Rogers Water Utilities.

Noble said the move to Rogers made sense professionally and personally.

"I've enjoyed my nine years of employment with City Corporation," Noble said. "It was a difficult decision but the City Corporation team is well equipped to adjust to the changes ahead. As the options were considered, I realized this was better for me professionally and for my family. This allows us to move closer to our family."

Russellville Mayor Bill Eaton said he wished Noble well and future success.

"I'm pleased to have had the opportunity to work with Craig," Eaton said. "The connection between City Corp. and the city is an important one and we've always had a cordial relationship. I wish him all the success in Rogers."

The City Corporation Board called a special meeting at noon on Monday at the City Corporation offices. The board will adjourn into executive session regarding personnel matters their agenda stated.

Noble replaces Tom McAlister in Northwest Arkansas, who retired from Rogers Water Utilities in April.

Noble's salary in Rogers will be \$104,062 annually, the same amount McAlister made upon his retirement. Noble will also receive \$7,200 per year for an auto and technology allowance and up to \$10,000 for moving expenses.

Noble's annual salary at City Corp. was \$119,288 annually.

Rogers Utility Commissioner Don Kendall said after months of searching for McAlister's replacement, the commission felt Noble was the right man for the job.

"We went closely over his resume and work experience and talked to a lot of people," Kendall told The Courier Friday. "It was really a combination of everything — his education, his ability to community and his experience with issues similar to ones we have on an ongoing basis, that made him the right man for the job. We are extremely pleased to get Craig and resolve our leadership issue."

Noble's last day to work at City Corp. is Sept. 21.

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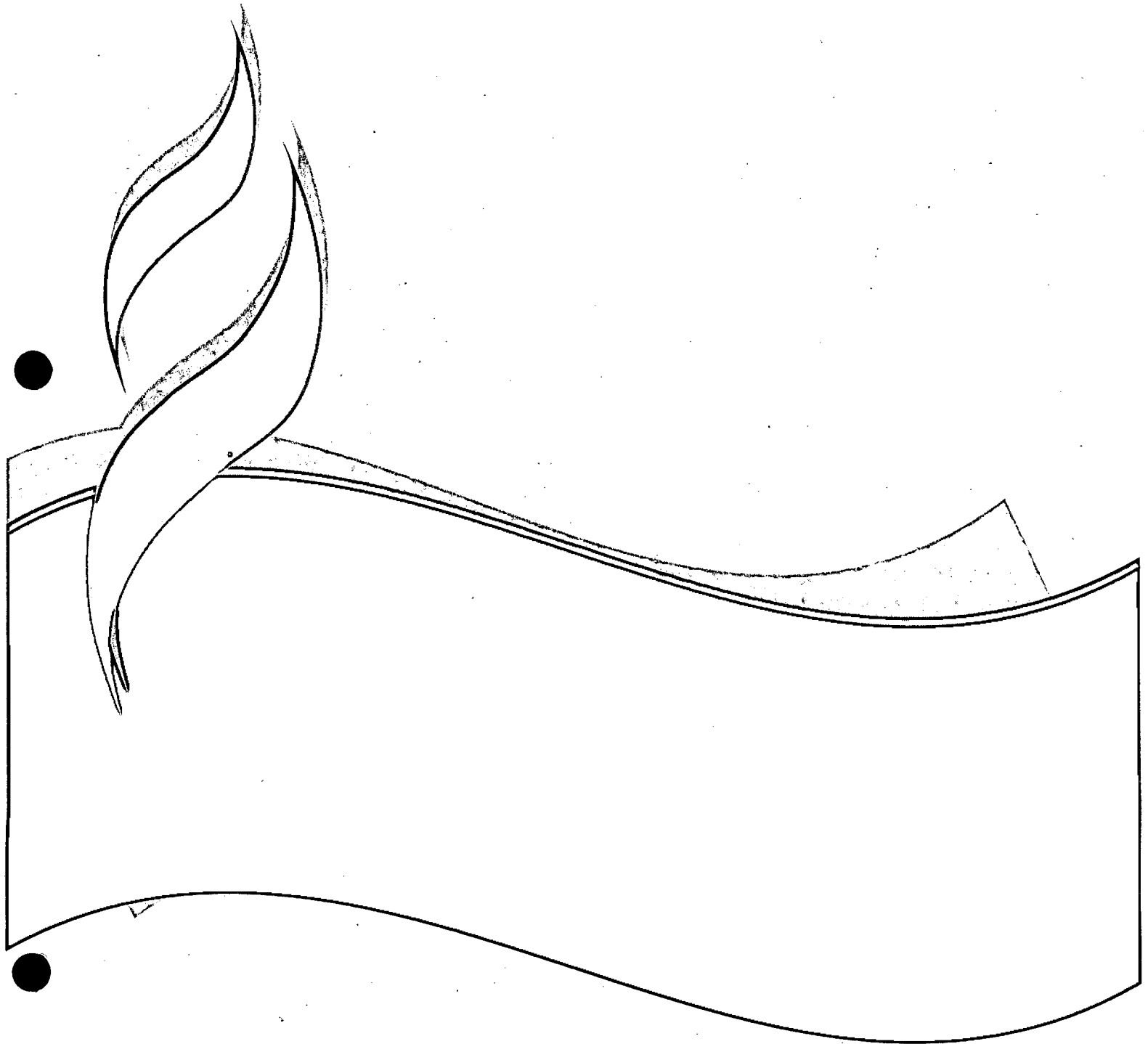
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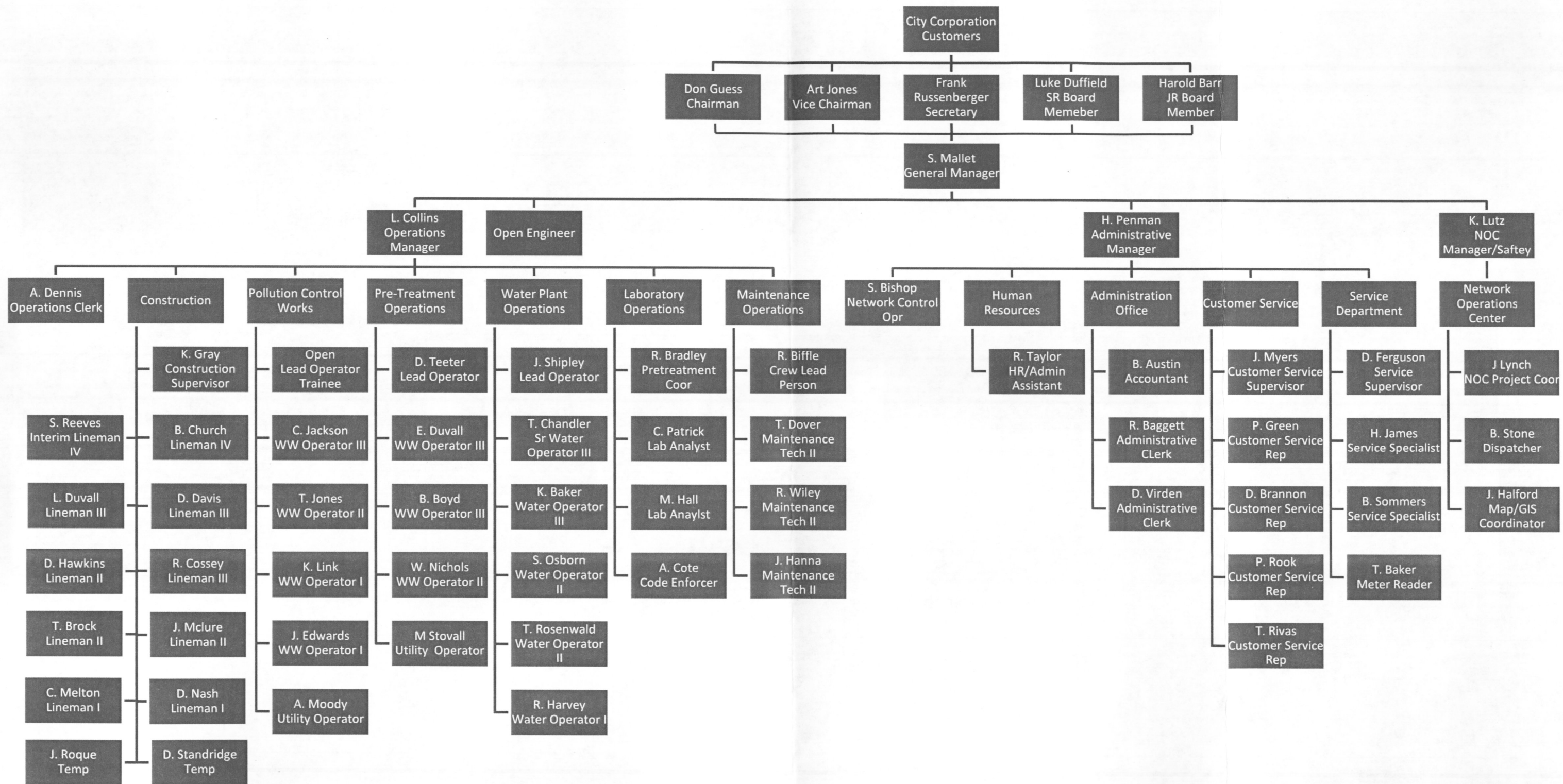
COMPLETED SSES SUBBASINS



APPENDIX 14

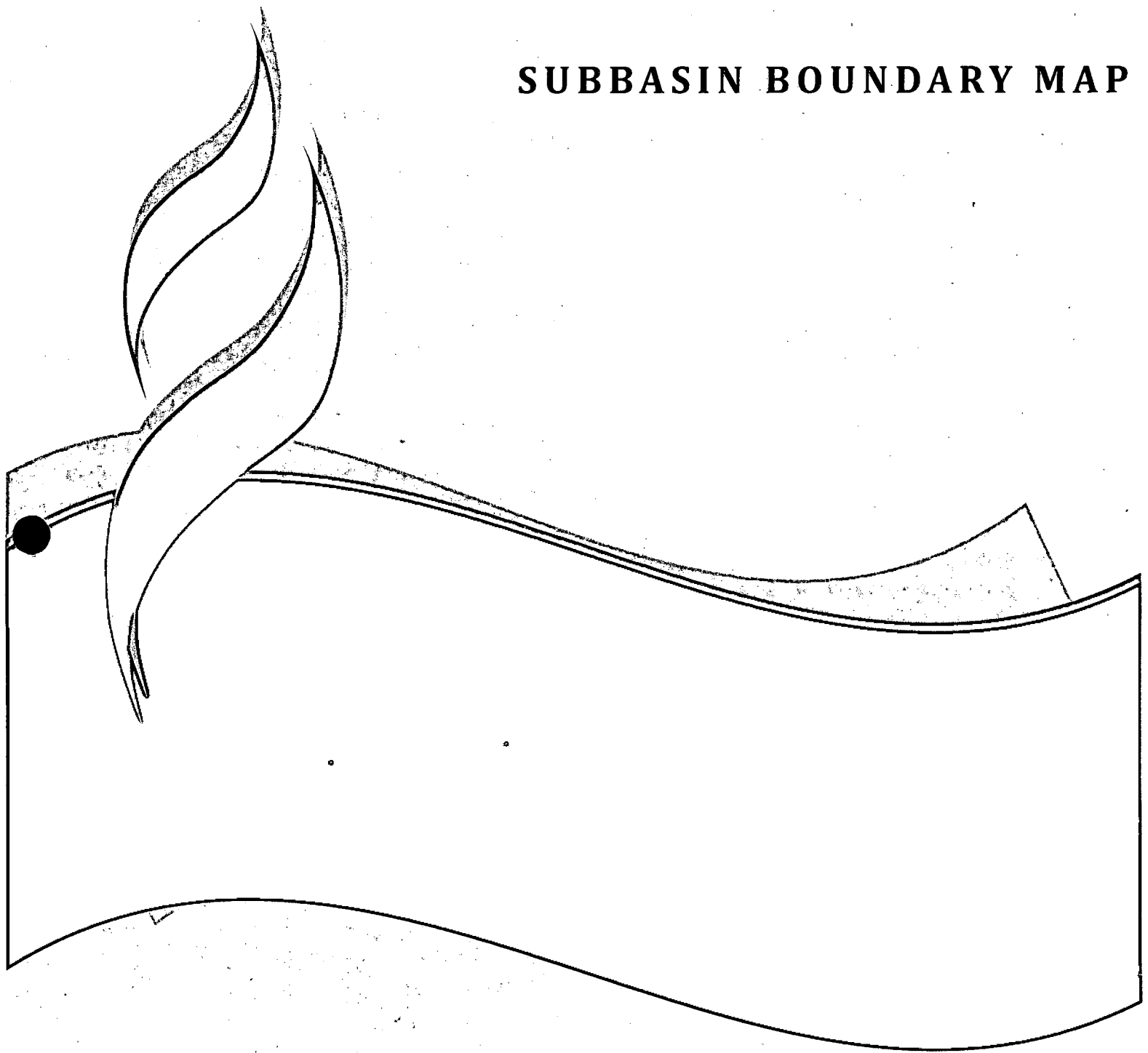
ORGANIZATIONAL CHART



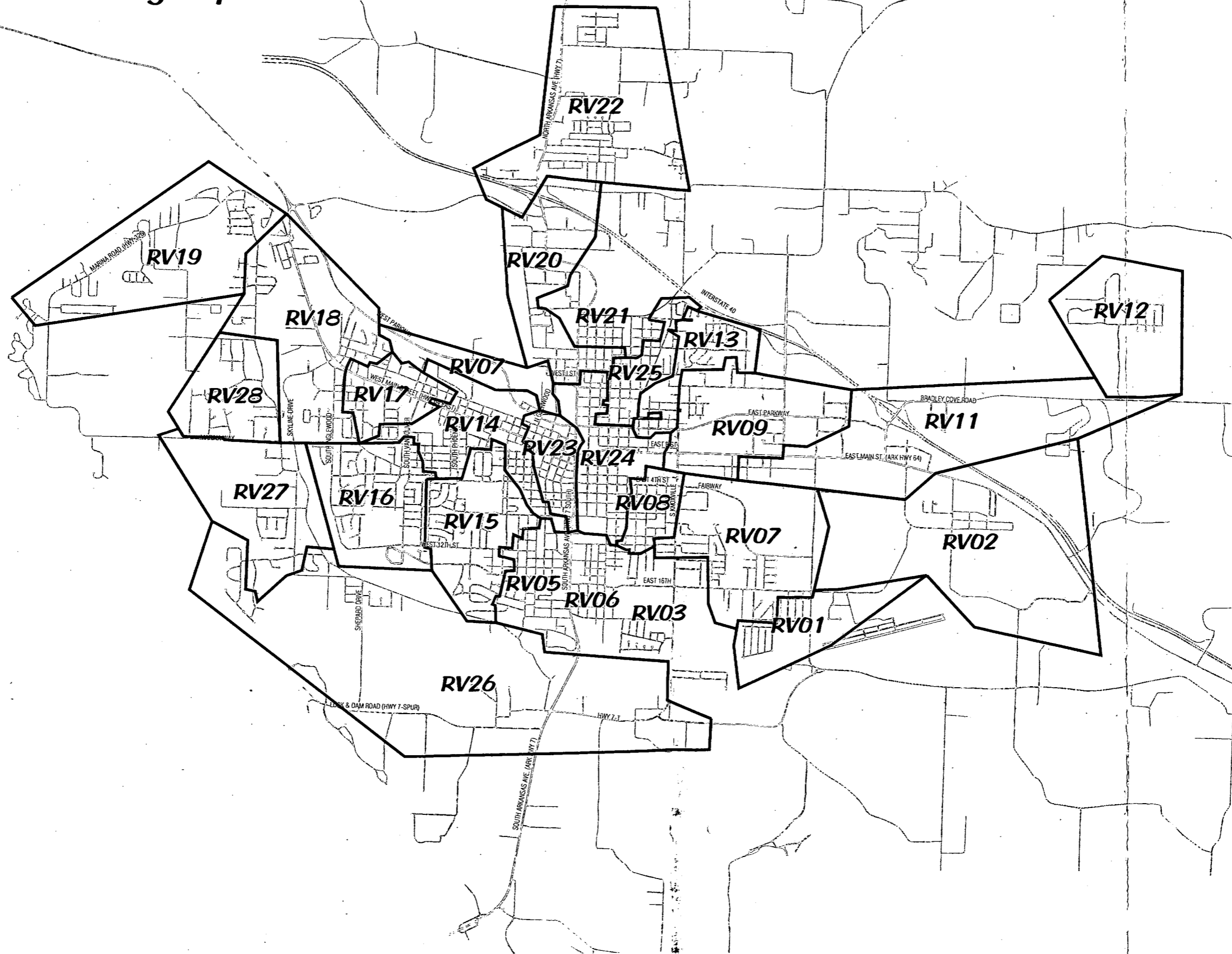


APPENDIX 15

SUBBASIN BOUNDARY MAP

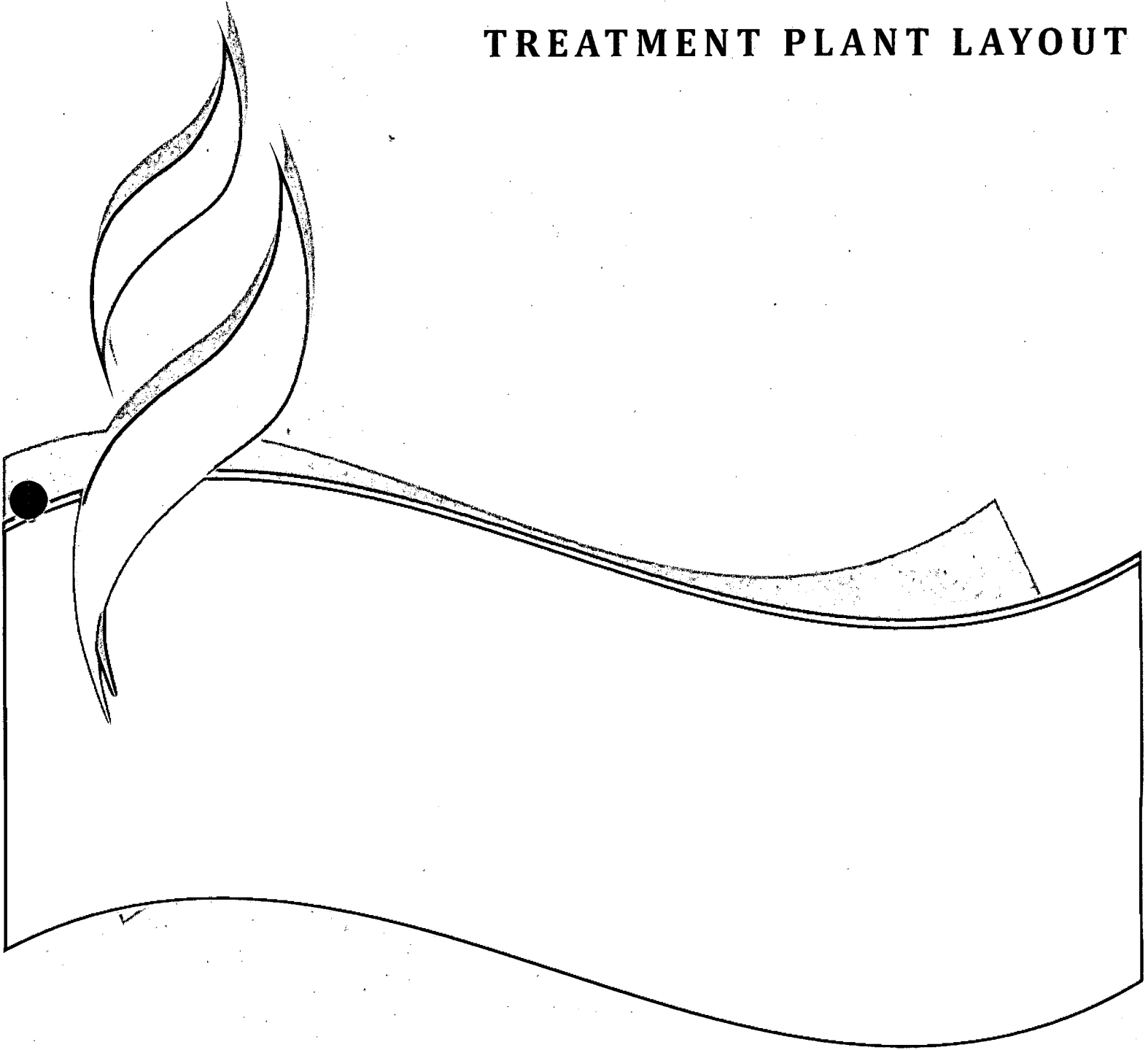


APPENDIX 15
Subbasin Boundary Map

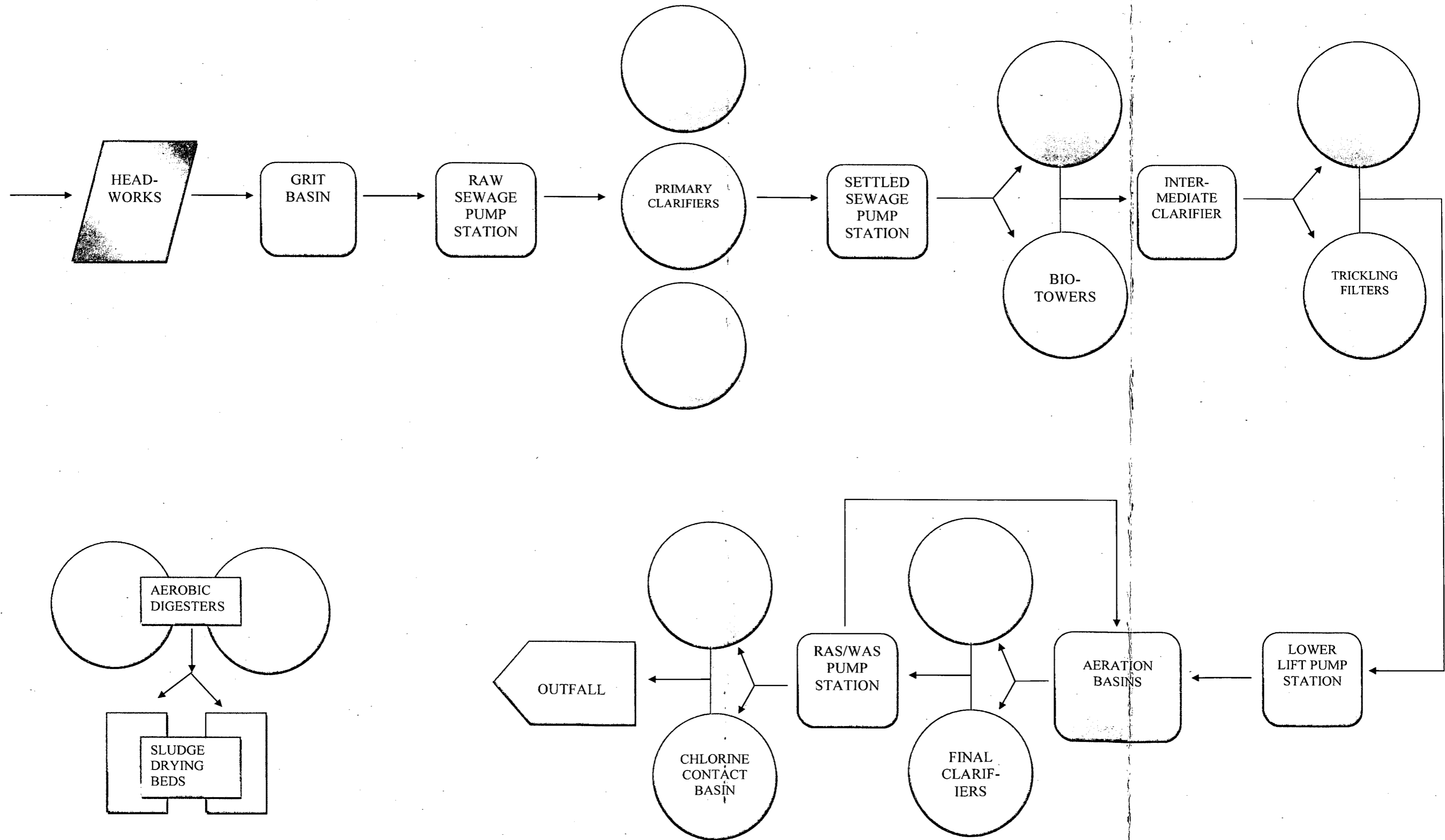


APPENDIX 16

TREATMENT PLANT LAYOUT



APPENDIX 16- TREATMENT PLANT LAYOUT



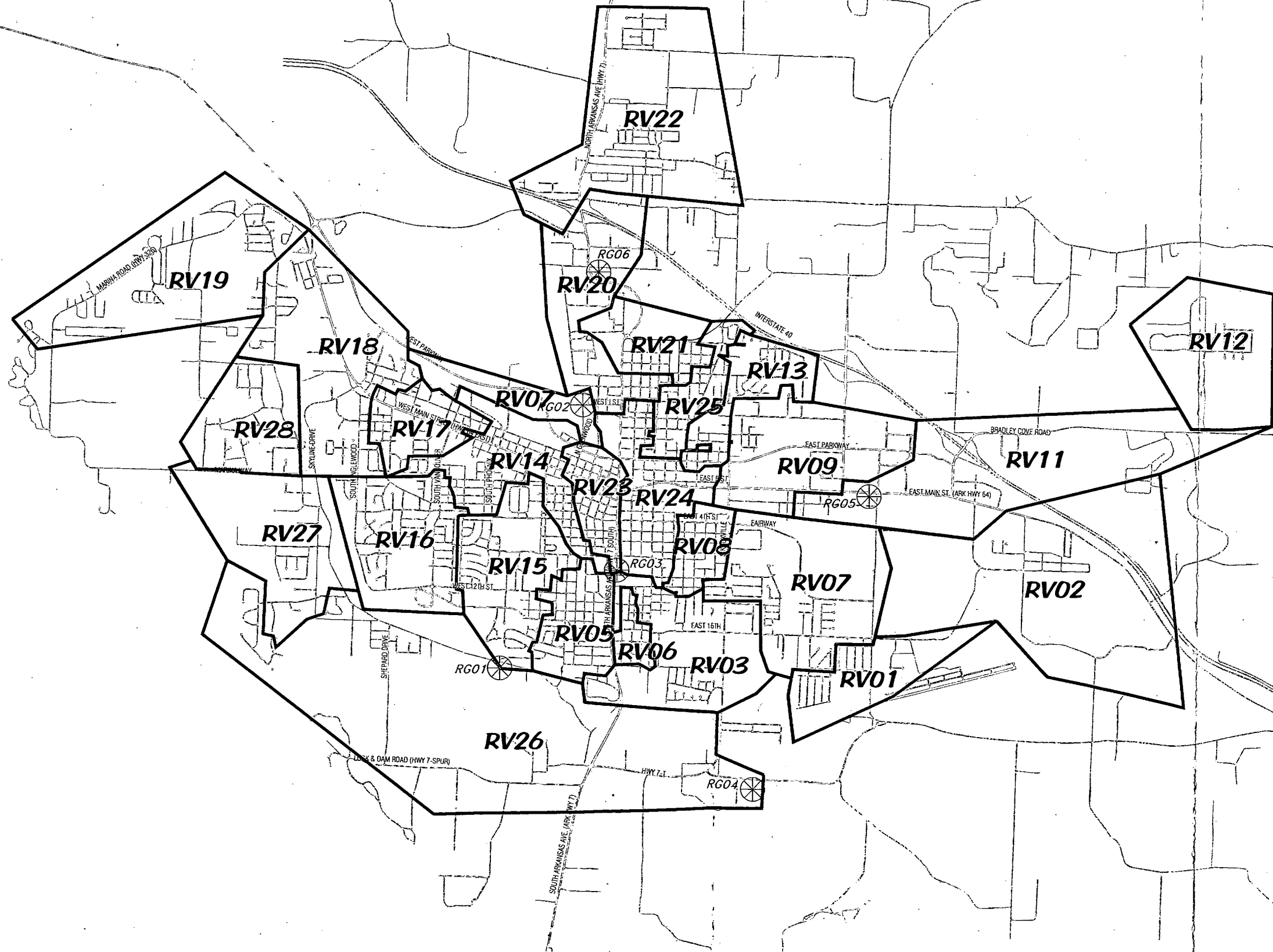
APPENDIX 17

TEMPORARY RAIN GAUGE LOCATIONS



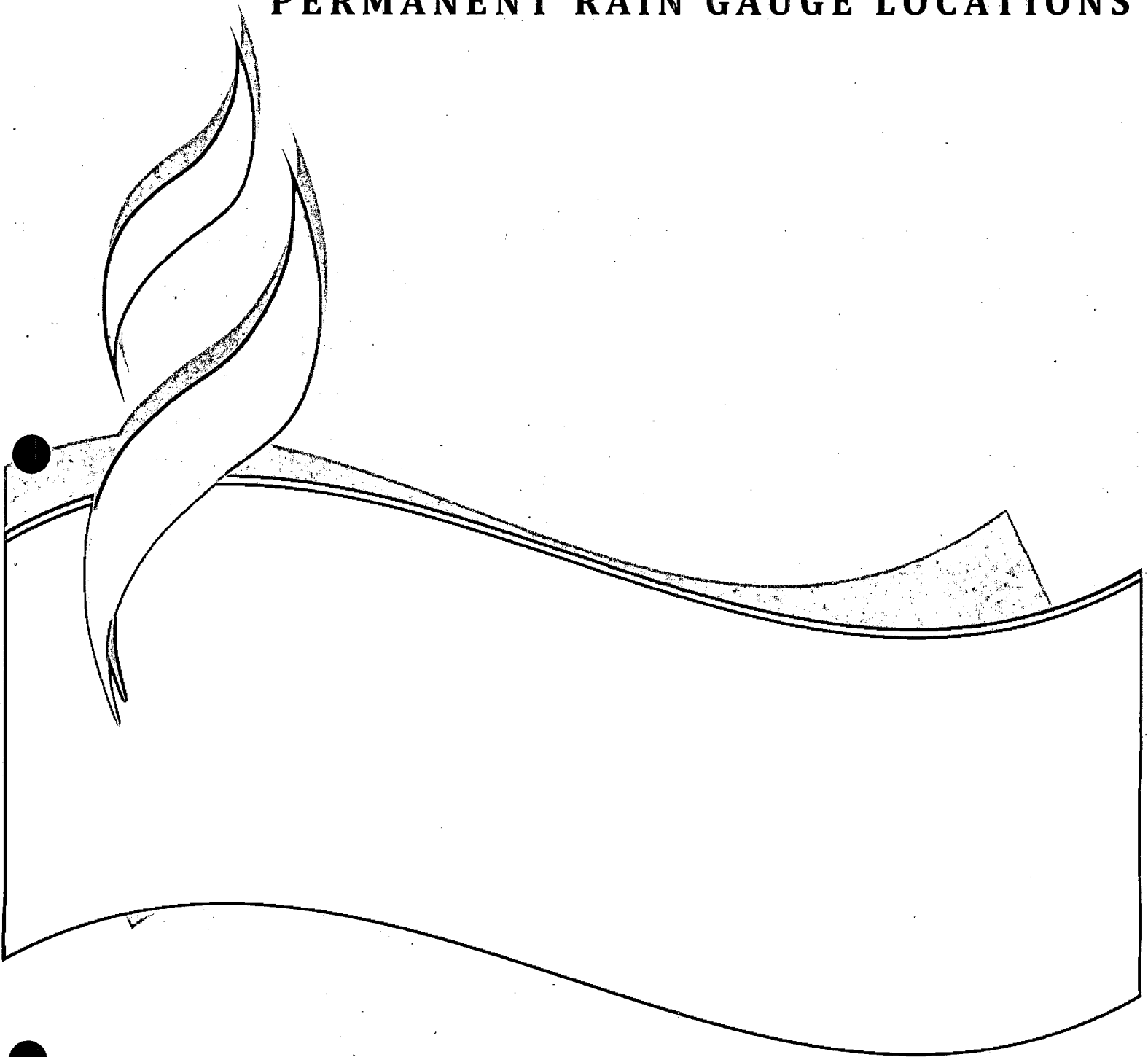
APPENDIX 17

Temporary Rain Gauge Locations



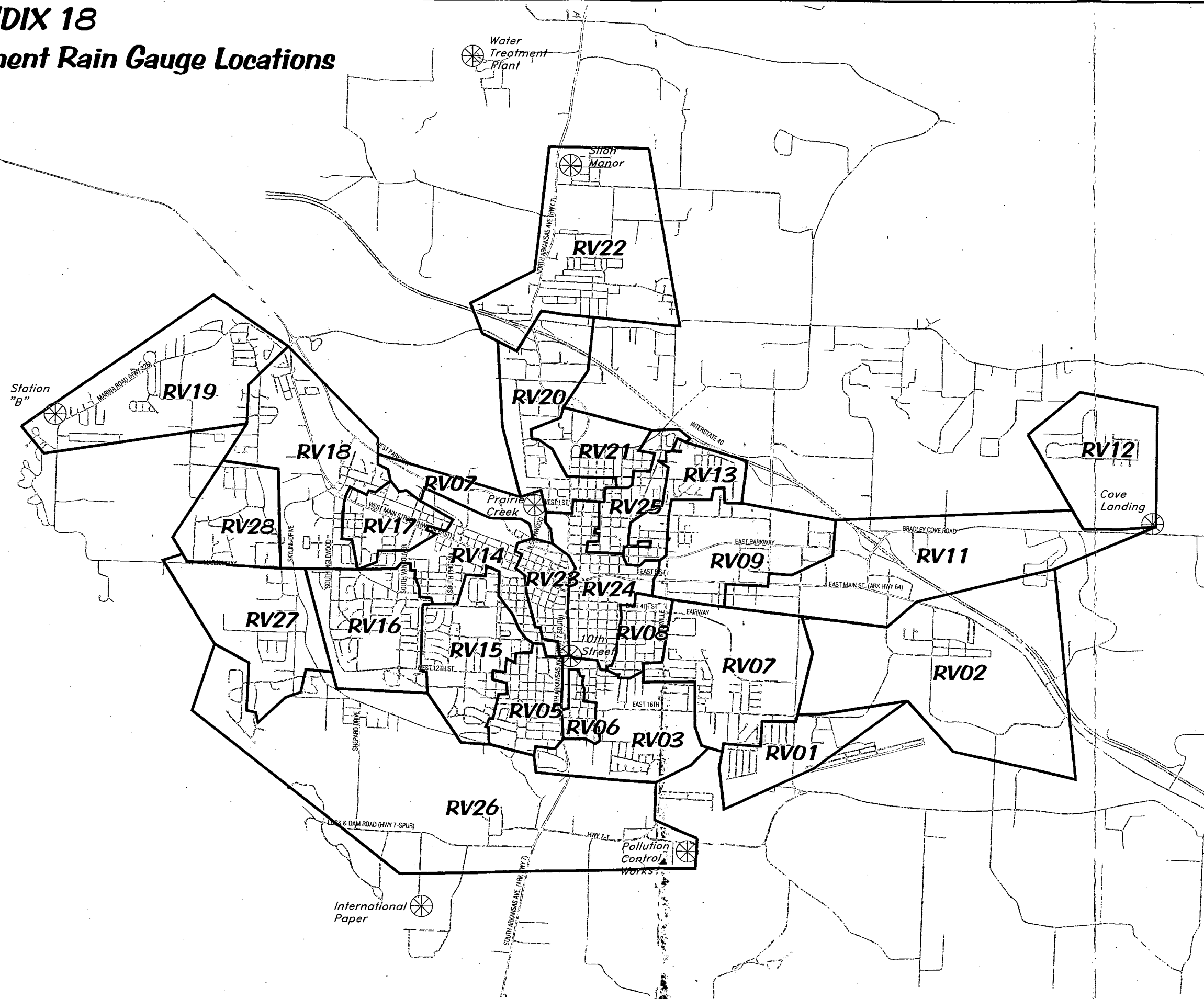
APPENDIX 18

PERMANENT RAIN GAUGE LOCATIONS



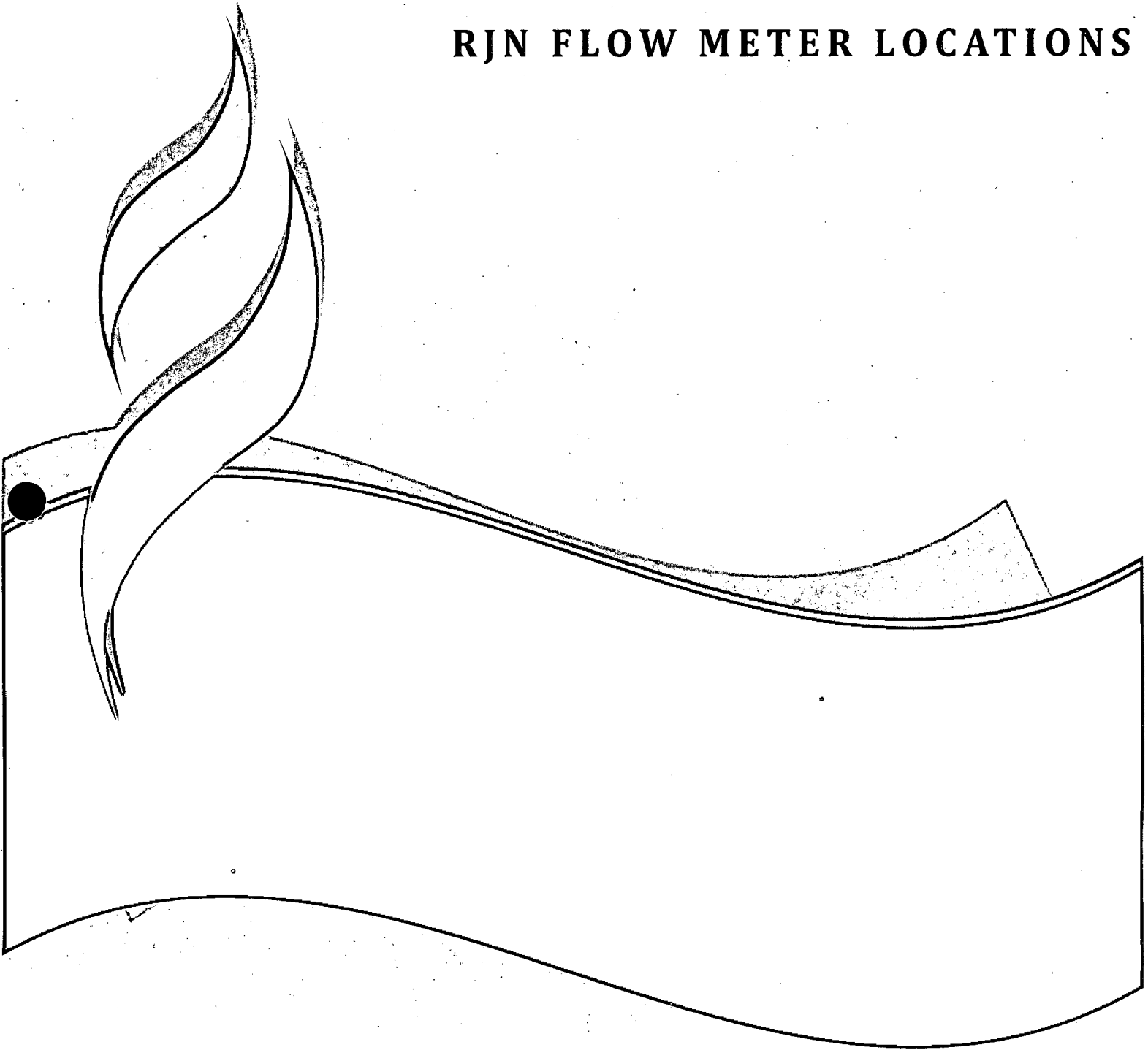
APPENDIX 18

Permanent Rain Gauge Locations



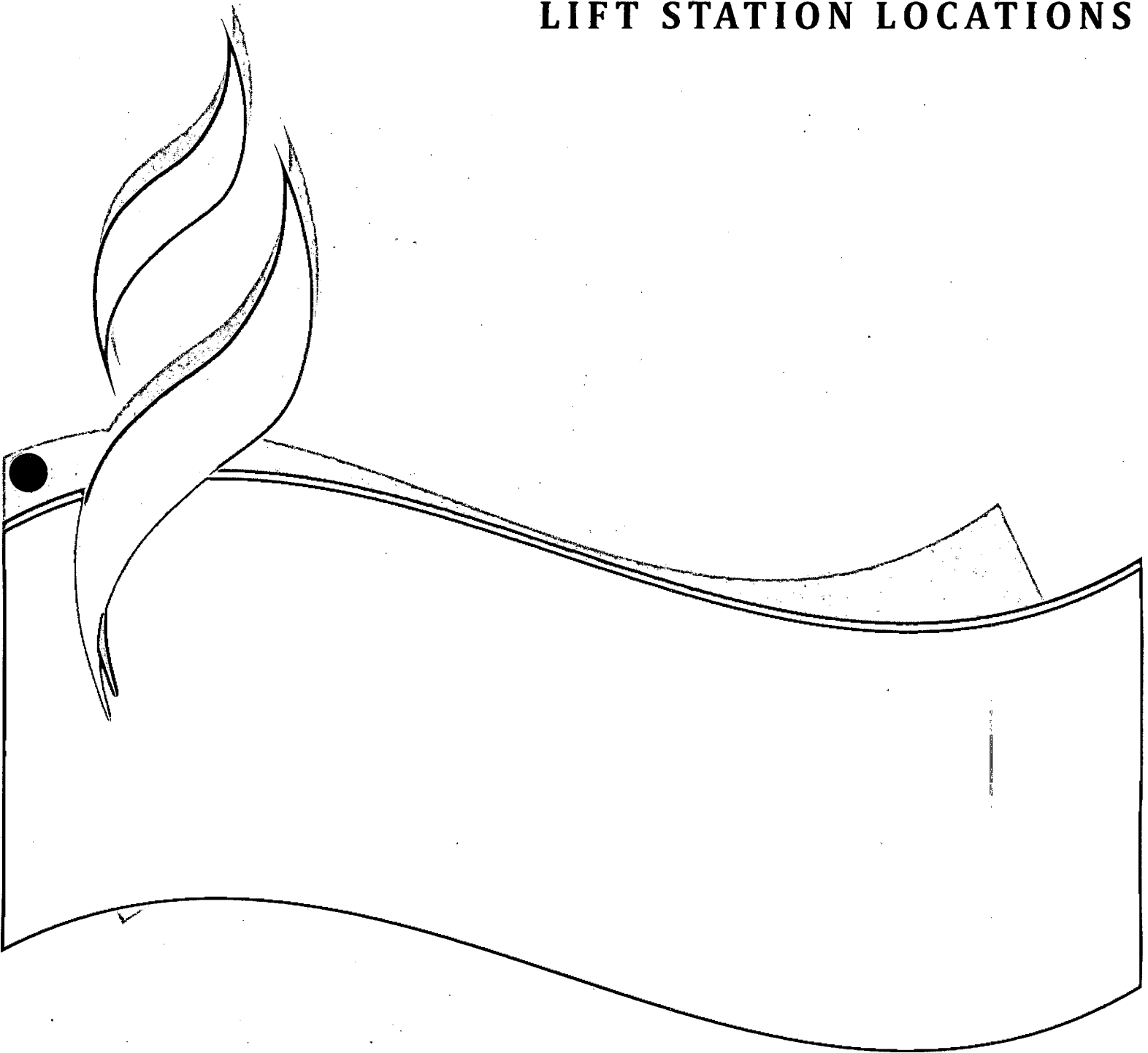
APPENDIX 19

RJN FLOW METER LOCATIONS



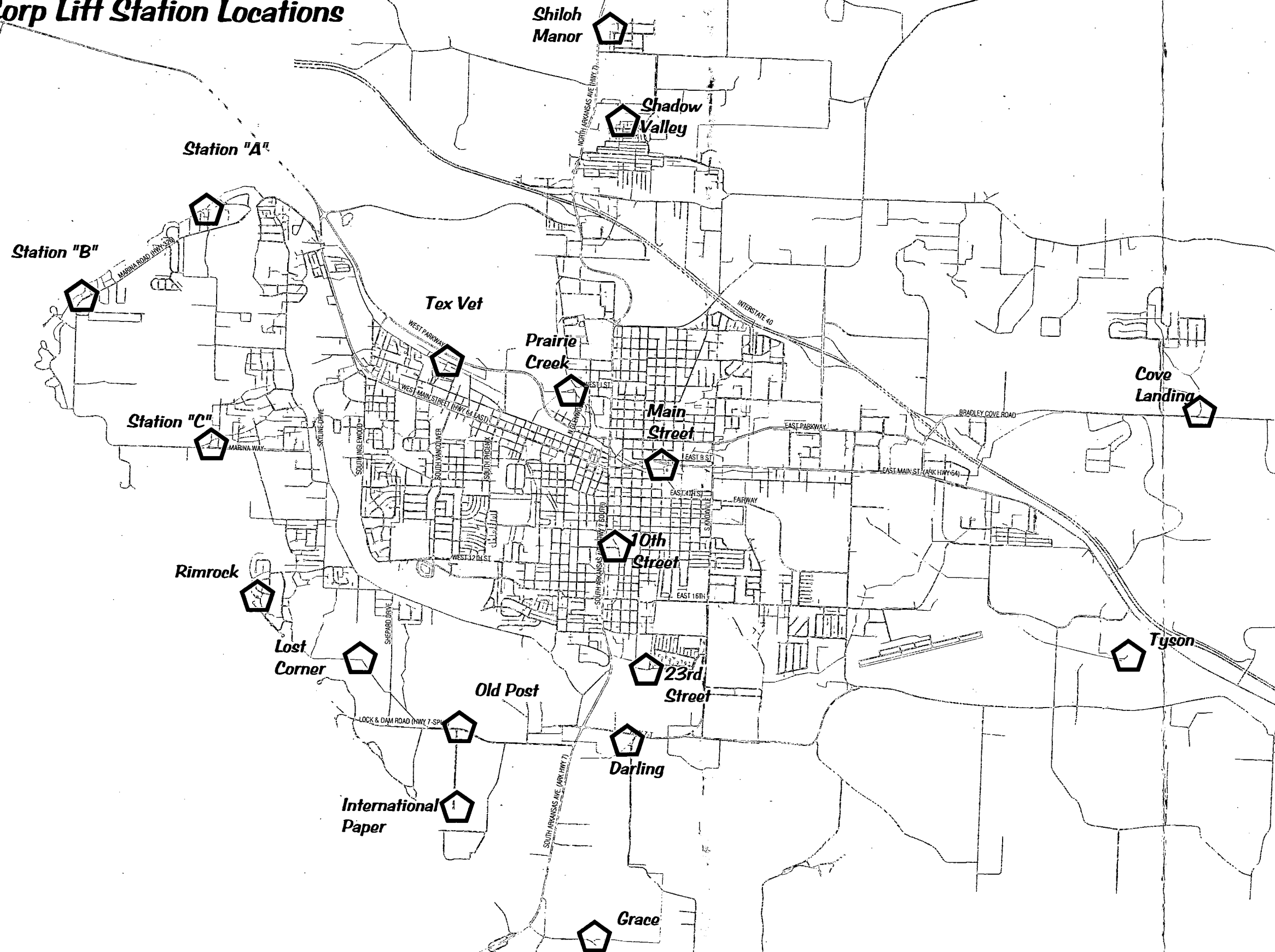
APPENDIX 20

LIFT STATION LOCATIONS



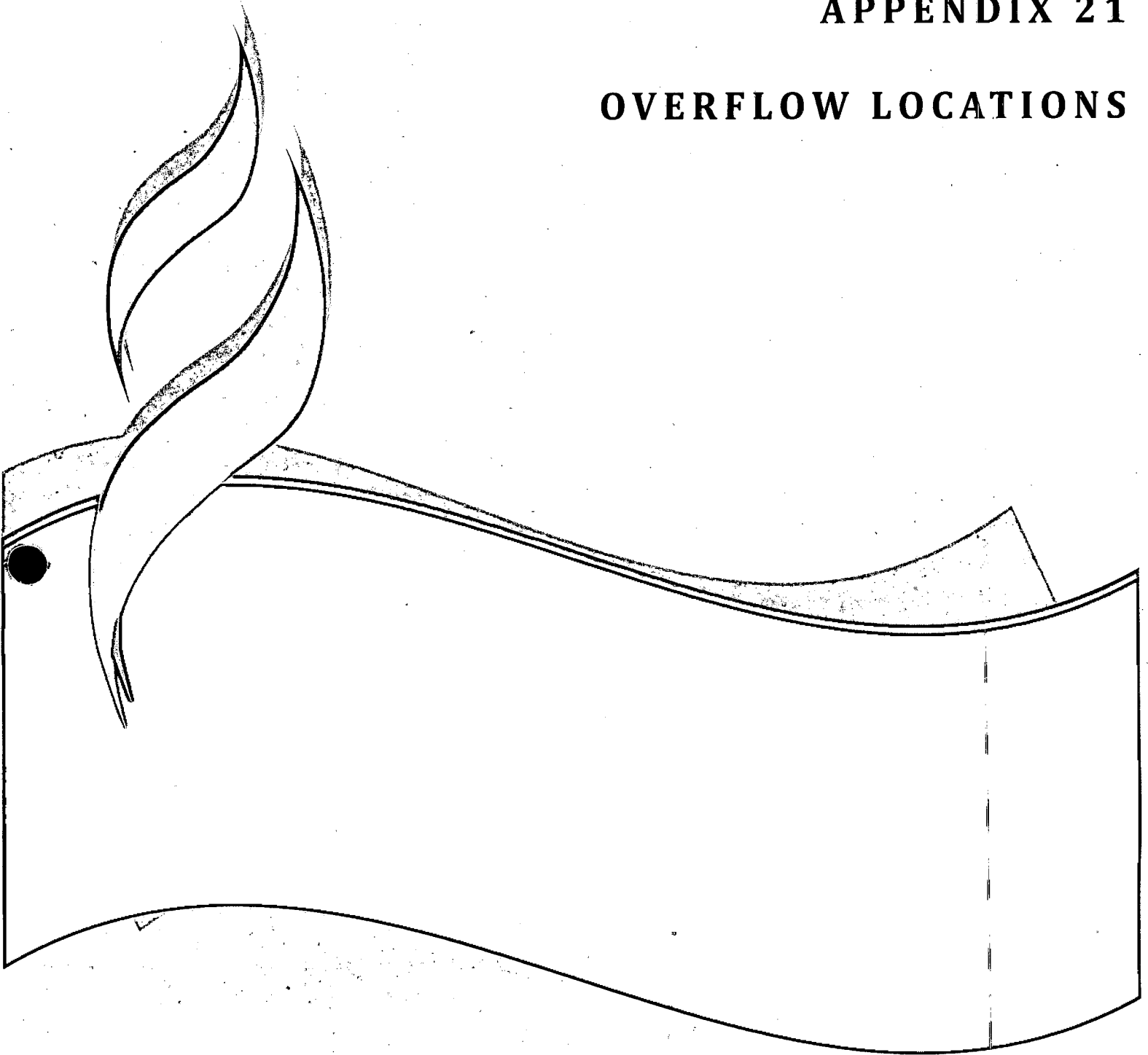
APPENDIX 20

City Corp Lift Station Locations



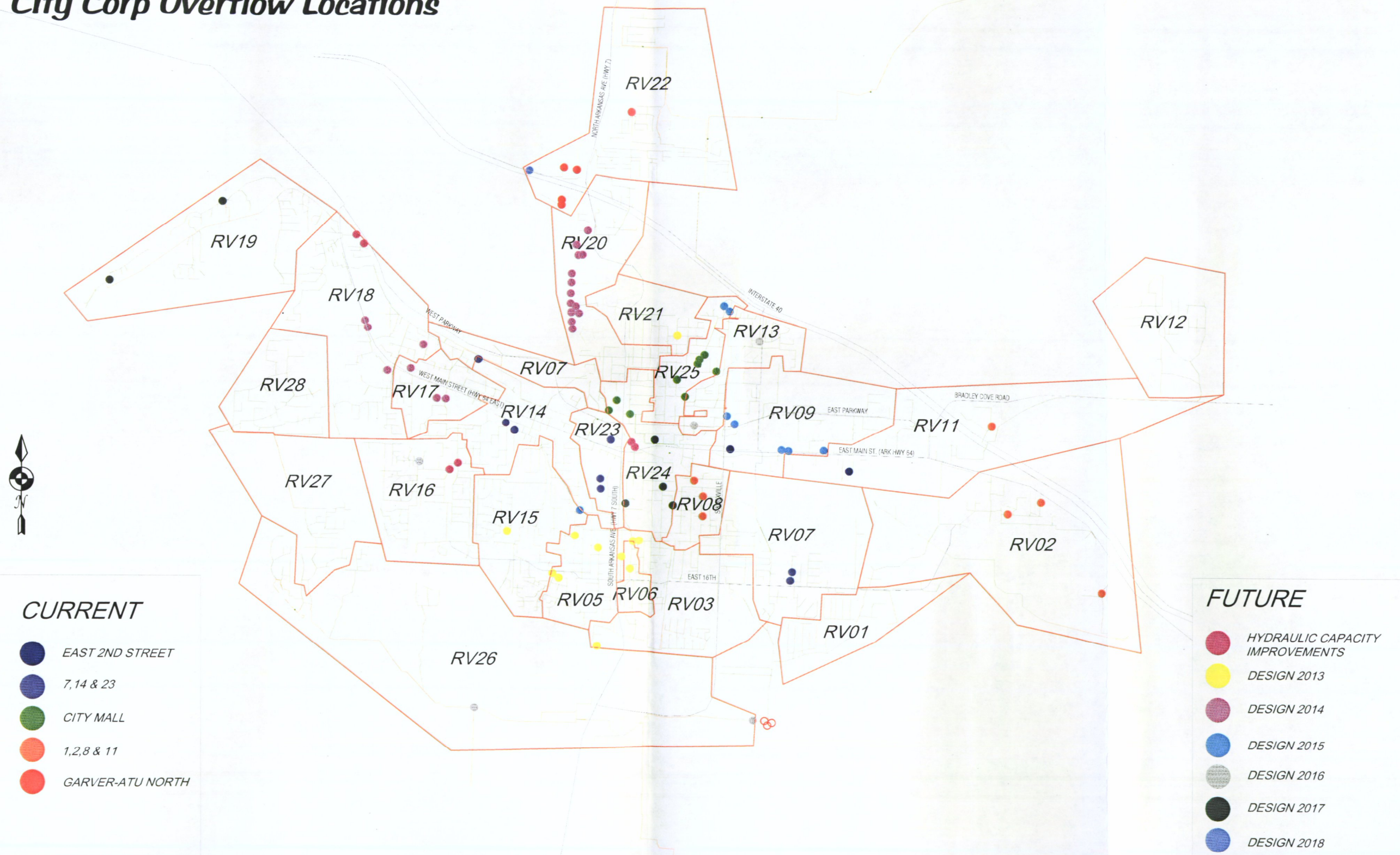
APPENDIX 21

OVERFLOW LOCATIONS



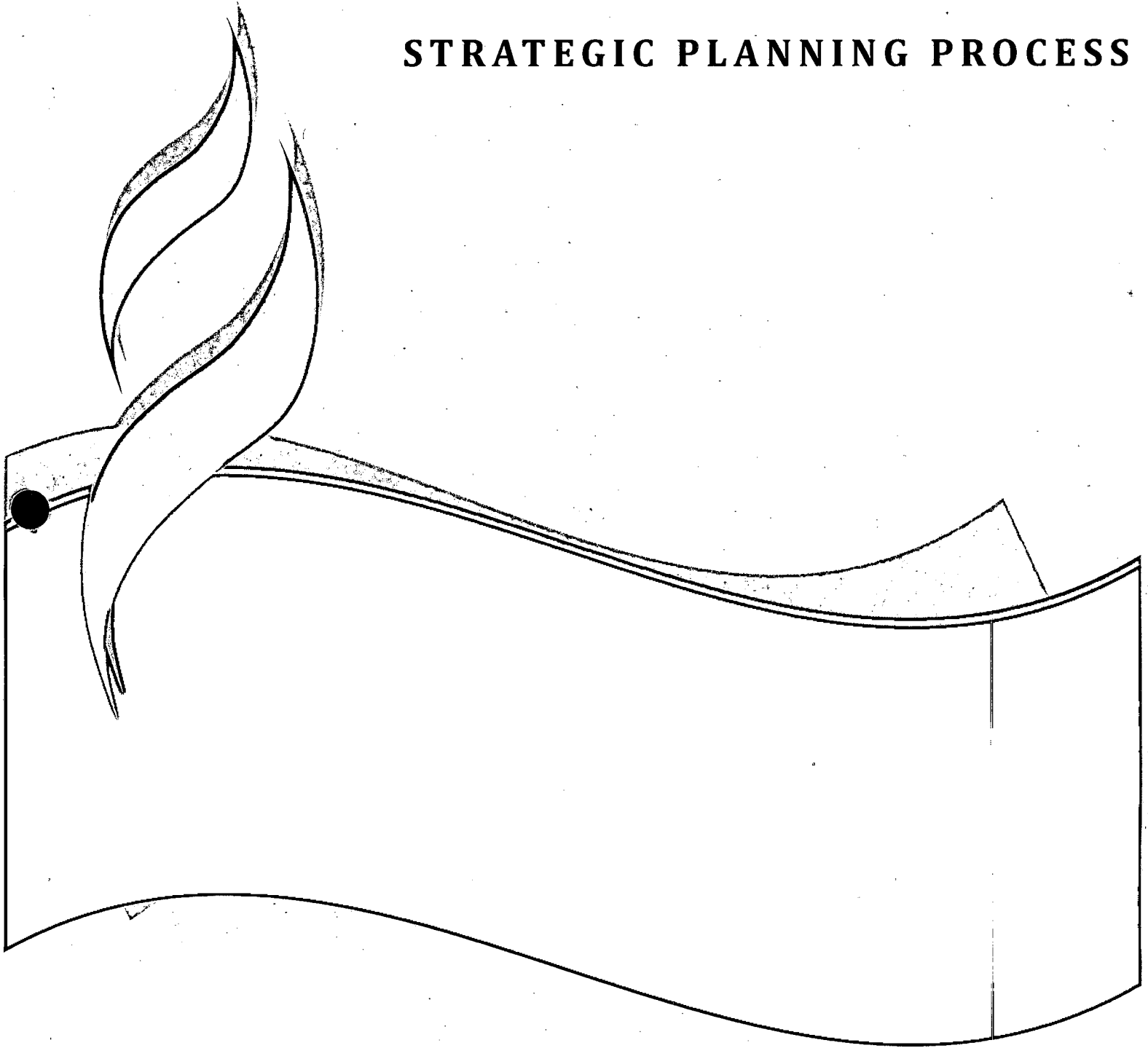
APPENDIX 21

City Corp Overflow Locations



APPENDIX 22

STRATEGIC PLANNING PROCESS



STRATEGIC PLANNING PROCESS FOR RECOMMENDATIONS

1. Vision-Mission

Protecting the environment and providing for the future!

2. Goals

Protect the Environment

Prevent Sanitary Sewer Overflows

Provide Adequate Capacity

Prolong Sewer System

Provide Effective Resource Management

Provide Effective Communication

3. Plans

Rehabilitation

Root Control

Inspections

Evaluation

Overflow Recording

Rain Gauge Usage

Recording Methods

Operating Practices

Easement Clearing

Public Education/ Outreach

4. Actions

Prioritize Sanitary Sewer Lines

Annual Root Control Program

1. Manholes
2. Stream Crossing

RJN Phase II

Spreadsheet Log to watch for improvement and how they were achieved

1. New Program
2. As built

1. Design
2. Maintenance

1. Equipment
2. Crews

1. Brochures
2. Posters

