

Figure 8: TAG Pending Approval Maintenance Work Order

200RMO00012 Work Orders Pending Approval

General | Scheduled | Equipment | Tracking | Cost | Override

No.: 200RMO00012 Description: Grease Pump

Maint. Type: PREVENT Temperature: 25 Celsius

Problem Code: Weather Condition: SUNNY

Work Code: PMT-PUMP Reason Code: MAINT

Priority: Routine Job No.: 2008JOB00972

Status: IN PROCESS Approval Pending: ☒

Order Type: BI-ANNUAL Work Order No.: 200RMO00012

Released Orders: 1

Planned Orders: 0

Step No.	Description	Technician Code	Result Input Ref.	SLA Stage	Equipment ID	Standard Time	Estimated Time	Actual Time	Starting Date	Starting Time	Ending Date	Ending Time
1	EFF-LUB... Effluent Pump lubricate motor	TYSEV		TEST070...		0.00	0.00	0.00	09/03/10			

Color Line Findings Report Print Help

Figure 9: TAG Printable Work Order

Maintenance Work Order

DESCRIPTION: Grease Pump  
ADDRESS: Lindell Beach  
1975 Vera Road

WORK ORDER NO.: 200RMO00012  
JOB NO.: 2008JOB00972  
WORK ORDER DATE: 09/03/10  
PAGES/PRINTED BY: 1 tsevrns  
DATE PRINTED: September 7, 2010 10:37 AM  
UID#: 200AGEVE00016

Lindell Beach BC V2R 4X1  
SUPERVISOR: Unassigned Work Orders  
VENDOR:

PRIORITY: Routine  
STATUS: IN PROCESS  
ORDER TYPE: BI-ANNUAL

MAINT. TYPE: PREVENT  
TECHNICIAN CODE: TYSEV  
STANDARD TIME: 0.00

DUE BY DATE: 09/03/10  
REQUESTED SERVICE DATE: 08/27/10  
ESTIMATED TIME: 0.00

EQUIPMENT ID: TEST070246 / Well Pump /  
LOCATION: 1975 Vera Road, Lindell Beach, BC, V2R 4X1  
SERIAL NO:  
ENTERPRISE: REG: BC-COA FAC: LB AREA: MANUFACTURER:  
COMPANY ID: LINE:

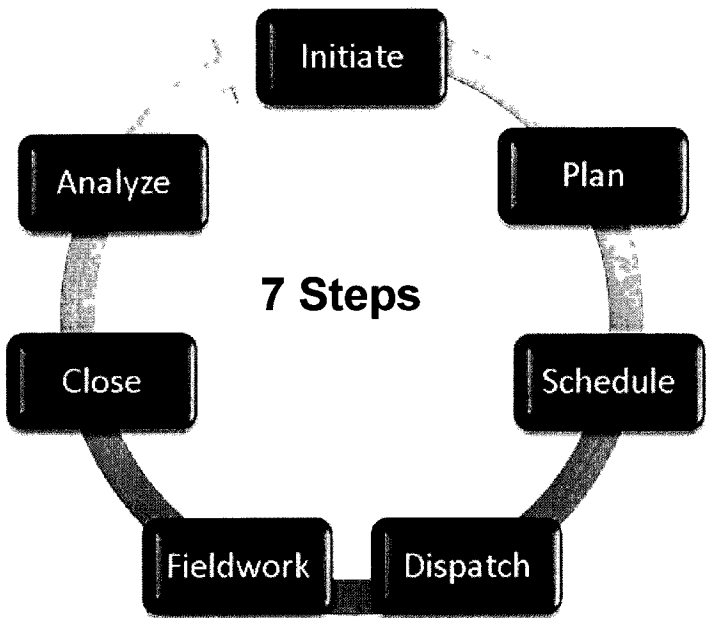
STEP	Finished	Description	Technician Code	Starting Date	Standard Time	Estimated Time	Actual Time	Test Results	Unit of Measure
1	No	Effluent Pump lubricate motor	TYSEV	09/03/10	0.00	0.00			

TAG allows Corix to create a central database to store and manage capital assets through their entire life cycle, once we pre-define the maintenance and/or inspection schedules in TAG. It allows us to understand what is required in terms of tools, manpower and instruction on how to complete the predefined task. More importantly on events that are unpredictable such as a

breakdown repair or emergency intervention we can predefine who to call, what course of action needs to be taken, and step by step instruction on how to repair the equipment and resolve the emergency as efficiently as possible. All the required prerequisites in terms of resource skills, equipment and documentation are all stored within the system.

The Asset Guardian can be as simple as managing a single piece of equipment through its entire lifecycle by following the seven essential life cycle steps. It does this by initiating work orders, once it reaches a given meter (i.e. date, run time, revolutions) TAG will then dispatch a plan of action and a suggested schedule for the right combination of personnel/stakeholder to follow. The personnel/stakeholder then goes out and accomplished the field work or task. To help the personnel/stakeholder accomplish the task, it tells them the plan and all equipment needed in order to accomplish the tasks. Once the work order is closed it can then be analyzed to see how to more efficiently manage the assets in question.

**Figure 10: Operational and Maintenance Strategies  
Work Order Process from TAG System**



It can also be more complex, to have an interactive schedule matrix showing technicians’ schedules by calendar day through the dispatch board. This allows all to see what tasks are expected in the week and the amount of hours they are estimated to spend.

TAG, is part of a thorough preventive maintenance process that will include periodic lubrication of bearings, calibrating of sensors, and visual monitoring of components. These preventive maintenance procedures and schedules will be documented and provided in maintenance manuals.

TAG will also include a maintenance schedule for each major piece of equipment which will be designed to provide the best overall life cycle costs while preventing major breakdowns.

Corix can utilize the commissioning period and the time available during Construction of new assets to develop a numbering convention based on the CES design Process Instrumentation Drawings (PID) for all equipment and instrumentation or during the “transition phase” for existing facilities. In addition, assets can be linked to cost centers, their original valuation tracked, and changes due to work orders or projects can be traced through the system. The Asset Guardian will be used to manage the maintenance activities for all identified capital assets requiring asset management and preventive maintenance.

This allows Corix to efficiently schedule and track all work orders, perform predictive maintenance analysis, assign maintenance priorities, track and analyze maintenance costs, and evaluate staff performance.

Corix ensures that our Operators are fully trained and conversant on the standard maintenance procedures for major maintenance activities and are familiar with TAG functions, scheduling and reporting and logging tasks.

TAG is configurable to allow us to schedule regular maintenance on equipment as well as including a Corix-initiated enhancement to schedule regulatory compliance activity, such as collection and validation of samples at locations in water or wastewater systems. For example, record fecal samples or perform and validate pH tests.



### 3 O&M/QUALITY MANAGEMENT PLAN & HEALTH SAFETY AND ENVIRONMENTAL (HSE) PLAN

Corix has developed a Quality Management Plan to meet internal/external regulatory and compliance requirements. This Quality Management Plan includes the following sections:

- Operating and Maintaining the Utility Systems
- Summary of Operation and Maintenance Practices

The quality management system proposed is composed of programs and processes that together ensure the elements that are central to the LCRA's satisfaction. These include:

- Management Responsibility
- Resource Management
- Product and Service Controls
- Measurement, Analysis, and Improvement

The components of each of these elements are described below.

#### 3.1 MANAGEMENT RESPONSIBILITY

- ***Establishing vision, mission and organization.*** Management that demonstrates its commitment to the development and improvement of the system quality.
- ***Conducting reviews of the system's performance and providing direction for improvement.*** Management reviews the quality management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness.
- ***Quality Planning.*** Ensuring that change is conducted in a controlled manner and that the integrity of the quality management system is maintained during change.

- **Document Control.** Ensuring that the correct versions of reviewed and approved procedures are available for use by project staff, including SOPs for repetitive activities.
- **Control of Records.** Ensure that records required for the quality management system are controlled and are maintained to provide evidence of conformance to requirements and of effective operation of the system.

#### 3.1.1 Resource Management

- **Assignment of resources necessary for system quality.** Needed to implement and improve the processes of the quality management system.
- **Establish training.** Identify competency needs for personnel performing activities affecting quality and provide training to satisfy these needs.
- **Providing facilities and an adequate work environment.** Identify, provide and maintain or manage the facilities and the human or physical factors of the work environment needed to achieve system quality.

#### 3.1.2 Product and Service Controls

- **Planning to Ensure the System Quality.** Identifying and performing the sequence of processes and sub-processes required to achieve the system quality.
- **Identifying LCRA Requirements.** Determine product requirements specified by the LCRA, those not specified but necessary for the intended or specified use and obligations related to system quality and compliance, including regulatory and legal requirements.
- **Control of Engineering Designs.** Includes determining responsibilities and authorities for design and/or development activities and the review, verification and validation activities appropriate to each design and/or development stage.
- **Purchasing.** Control of purchasing processes to ensure purchased product conforms to requirements. Evaluate and select suppliers based on their ability to supply products in accordance with our requirements. Ensure supply economy by monitoring purchases and prevention of unnecessary transactions.
- **Operations Control.** Control of production and service operations through the availability of information that specifies the characteristics of the product, where needed the availability of work instructions, use and maintenance of suitable equipment, monitoring activities and the implementation of defined processes for release, delivery and applicable system delivery activities.
- **Laboratory Certification and Quality Audits.** Quantifying, where appropriate, the products used, throughout production and service operations.

#### 3.1.3 Measurement, Analysis and Improvement

- **Internal Audits.** Audits are performed to determine if the quality management system is implemented and effective. Audits are planned and scheduled based on importance and risk of processes. Auditors are trained and audits are conducted and reported.
- **Inspection Program.** Inspection of product and services will be conducted in accordance with written procedures. Contract requirements will be used as the basis for establishing inspection criteria. Non-conformances will be documented and defect percentages determined. Corrective action will be taken and effectiveness evaluated.

### 3.2 OPERATING AND MAINTAINING THE UTILITY SYSTEMS

In the Operating Plan, the procedures were described that Corix proposes to implement in the O&M of the utility systems in accordance with all applicable Federal, State, and local laws/regulations. Our proposed operational strategies are presented in the following sections.

#### 3.2.1 Operational Strategies

- **Recurring and Preventive Maintenance** – All maintenance will be completed in accordance with manufacturer and industry standards. Preventive maintenance is the key to reliability and quality of the utility systems. The maintenance system is designed to remind staff what work to do and track system results so they can be used to better predict future requirements. The operations plan will explain the computerized software used to manage the preventive maintenance program. This system is also used to track and notify staff of all types of routine requirements such as motor maintenance at the plant or a well.
- **Sampling and Analysis** – The sampling will be performed in accordance with State, Federal and industry standards. The analysis will be split between the on-site staff and a contract laboratory. The on-site staff will handle bench tests, while an outside lab will be used for all compliance testing. The use of an outside lab provides a degree of separation of duties and independent verification of performance and is consistent with the requirements of the QMP. All lab testing will follow standard guidelines and the Quality Assurance/Quality Control program outlined in the Quality Control Plan.
- **Meter and Equipment Calibration** – The maintenance records for equipment, including meters, are put into MIS, which helps track preventive maintenance. This program is discussed in the Operations Plan and the meters are likewise regulated under the governing tariffs.
- **Service Interruption Frequency** – The object is to eliminate any service interruptions and, if one occurs, minimize its affect on the operation of the utilities. A service interruption plan will be implemented to track the number, cause, and severity of any service outages, and in conjunction with regular line cleaning, will be a key part of reducing the number of recurring problems.
- **Operating Permits** – The primary operating permits will be the State or Federal issued compliance permits. Other permits will involve many of the LCRA requirements, from security to prior notification of digging and plans.
- **Employee Certifications** – Corix Team will staff the utility operations with appropriately certified employees as required by the State of Texas. Security clearances will be obtained where required.
- **Operating Approach** – The operation of the combined systems will involve a number of activities, including:
  - Utility Plant Operation
  - Water Treatment and Distribution Systems
  - Wastewater Treatment and Collection Systems
  - Local Metering and Remote Monitoring
  - GIS (Geographical Information System) Mapping
  - Equipment Maintenance
  - Risk Management
  - Health and Safety
  - Community Outreach

3.2.2 General Environmental Compliance

A major factor in the operation of the utilities is environmental regulation. The State of Texas requires permitting, monitoring and reporting of activities that are part of the terms and conditions of this contract and includes the following:

- Wastewater treatment and collection system;
- Water treatment and distribution system; and
- Environmental conditions associated with operations and/or modifications of the utility system.

Corix has developed a regulatory and contracting strategy to address the above issues. The overall goal of this strategy is to comply with the regulatory requirements, while achieving contract terms and conditions that are mutually acceptable to the LCRA and Corix. Corix has developed a comprehensive regulatory strategy plan that identifies all state and local regulatory and policy issues that may impact the utility privatization, along with the specific approaches to effectively address and manage these issues. Table 6 summarizes the environmental regulatory programs that may apply, including program applicability and regulating agency.

Table 6: Transition of Permits

REGULATORY PERMITTING PROGRAM	WATER	WASTEWATER
Contract Operator Certification	X	X
Drinking Water Standard	X	
Hazardous Waste	X	X
Solid Waste		
SARA Title III	X	X
Construction (and Industrial) Stormwater Permits	X	X
Natural Resources	X	X
Historical Resources	X	X
Air Quality – PSD/NESHAPS, construction and operating permits.	X	X
Toxic Substances Control Act (TSCA)	X	X

The following describes our approach to comply with the requirements, and address and manage the influences the regulatory agencies may exert on these operations.

3.2.3 Other Environmental Conditions

Other environmental conditions, such as asbestos containing materials (ACMs), lead-based paint (LBP), solid waste management units (SWMUs), unexploded ordnance (UXO), oil/water (O/W) separators, and other wastewater 'pre-treatment' units, and spills and releases, are also addressed to demonstrate our commitment to effective and safe O&M performance.

- **Asbestos Containing Materials and Lead-based Paints.** Any ACM or LBP contained in the buildings, structures, equipment and appurtenances designated for transfer under this contract will be addressed in accordance with personnel Safety and Health

requirements. The ACM and LBP abatement activities and the management of wastes generated during the abatement activities will be conducted in accordance with the applicable regulations.

- **Solid Waste Management Units (SWMU).** Corix understand that the LCRA will retain the responsibility and liability for investigation, response, remediation, and compliance actions to address past contamination and environmental conditions. Corix will coordinate with the LCRA for activities associated with utility components located within SWMUs or areas of past contamination such that planning and execution of contamination assessment and remediation actions by the LCRA can be accomplished with full compliance with the applicable regulations and reduced disruption of utility services.
- **Spills and Releases.** Corix will take precautions to prevent oil and hazardous material spills or releases due to our activities associated with the operation and maintenance of the utilities. We will also conduct any response action and reporting in accordance with the Corix Spill Prevention, Control and Countermeasures Plan (SPCC) and applicable regulations. We will comply with all Emergency Planning and Public Communication requirements.

#### 3.2.4 Long-Term Monitoring Procedures

The following list of activities provides a methodology of how Corix plans to ensure long-term quality services of the utility systems in a manner that will satisfy the issued contract requirements.

- Obtaining LCRA Feedback and Process Improvements
- System Inspections and Quality Assessment Procedures and Techniques
- Recordkeeping Processes
- Environmental Compliance Plan
- Performance Standards and/or Specifications
- Other Standards and Specifications

Figure 11: Feedback and Process Improvements Built into the Corix Quality Assurance Process

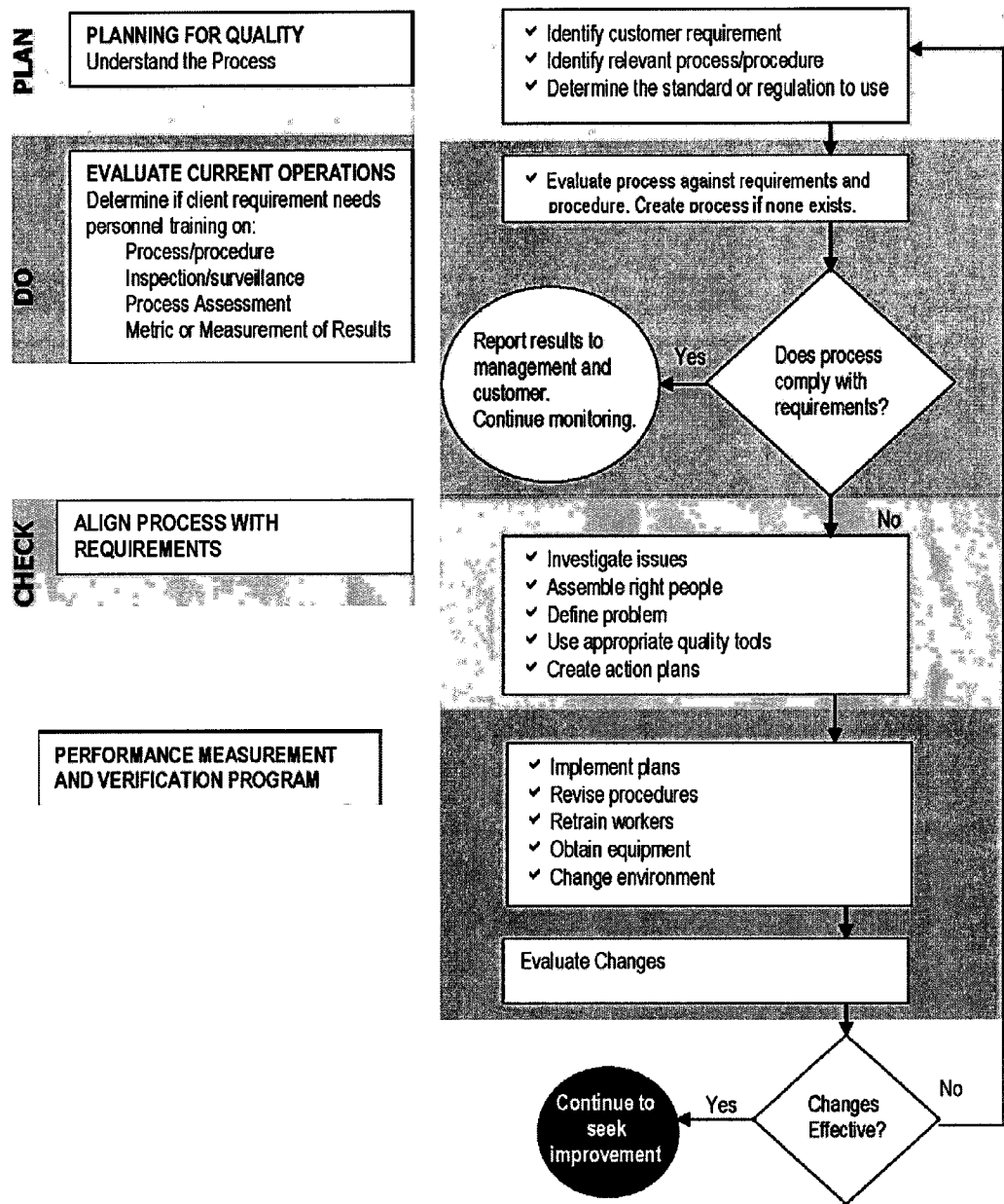




Table 7: Types and Formats of Information

TYPE INFORMATION	TYPICAL FORMAT OF INFORMATION
Utility System Maps	Electronic
GIS Data	Electronic
Construction Drawings	Electronic
As-Built Drawings	Electronic, Hardcopy
Construction Specifications	Electronic
Shop Drawings	Hardcopy
Maintenance Schedule	Electronic
Utility System Reports and Studies	Electronic
Hydraulic And Flow Models	Electronic
Cost Records And Reports	Electronic
Invoices	Electronic, Hardcopy
Purchase Orders	Electronic, Hardcopy
Correspondence With Regulators	Electronic, Hardcopy
Monthly Operations Reports	Electronic
Surveys and Feedback	Electronic
Contract Documents, Modifications	Electronic, Hardcopy
Correspondence	Electronic, Hardcopy
Inspection/Assessment Reports	Electronic, Hardcopy

### 3.3 SUMMARY OF OPERATION AND MAINTENANCE PRACTICES

All water utility activities will be governed by the relevant professional standards of the AWWA and the United States Environmental Protection Agency (EPA) as well as State requirements and Regulations issued by TCEQ. These references are available at Corix offices and are used routinely by the operations and engineering staff.

The following is a summary of the operation and maintenance practices that will be utilized to achieve the standards and requirements. Water utilities are governed by the professional standards of performance listed in the M series references of the AWWA. WEF standards are also used for wastewater. These references are available at Corix offices and are used routinely by the operations and engineering staff. Water quality standards will be maintained in accordance with EPA and TCEQ established standards for drinking and wastewater. Testing of the water will be performed by the on-site utility operator and periodic verification testing will be performed by a TCEQ certified non-affiliated testing lab. Results of the testing will be maintained by Corix at the project office and program office. Testing results will be reported to the TCEQ. These testing and reporting procedures are already in place and are used by Corix affiliates. Water quality testing and reporting will be added as a separate component to the existing programs.

The operation of the water treatment and distribution systems will involve a number of activities, including:

- Water Treatment and Distribution System
- Local Metering and Remote Monitoring
- GIS Mapping
- Equipment Maintenance
- Risk Management
- Health and Safety
- Customer Service
- Community Outreach

### 3.4 WATER TREATMENT AND DISTRIBUTION SYSTEM – MAINTENANCE STRATEGIES

- **Maintenance Work Orders and Records** - The operations center will be the focal point for planning, scheduling, and tracking maintenance work orders and for maintaining maintenance records. The operations center will utilize a MIS to maintain an inventory of all plant assets. The MIS will generate, track, and close out all maintenance work orders and maintenance related actions. A complete history of all maintenance performed on each asset will be kept in the MIS database.
- **Maintenance Procedures** - SOPs will establish responsibilities, schedules, equipment requirements, maintenance action checklists (MACs), and recordkeeping requirements for all maintenance tasks. The SOP will reference manufacturer's instruction sheets, parts information, drawings, maintenance manuals, and applicable regulations and standards such as ASME and AWWA codes, etc. as needed to clarify procedures and system information. The operations center will maintain SOPs and referenced information for all installed systems and equipment in the plant technical library. The library will have provisions for printing or duplicating copies of reference information for use by water system maintenance personnel.
- **Maintenance Philosophy** - Corix will employ a Reliability Centered Maintenance (RCM) approach for accomplishing maintenance requirements. Using the RCM approach, each utility system and equipment asset is analyzed to determine the most appropriate levels and types of maintenance, including preventive, predictive, or breakdown, based on asset criticality, impact of failure, and costs/benefits that are needed to meet performance and reliability requirements. In addition, we will optimize reliability by performing systematic condition assessments of all systems to evaluate not only physical conditions, but also system age with respect to life cycle costs, service call histories, operating environment, and criticality to Water System operations. The data gathered in condition assessments are analyzed and recommendations emerge for a planned maintenance program. An asset maintenance program may employ a pre-emptive predictive testing and inspection maintenance approach, a time interval maintenance approach such as scheduled preventive maintenance, a run to failure breakdown maintenance approach, or a combination of these maintenance strategies. The realization of the RCM approach is accomplished through a knowledgeable and experienced team of (PM/PDM) mechanics and technicians, coupled with the technical assistance of utility engineering. Our experience has shown that a planned RCM approach not only significantly improves maintenance work order completion rates, but

also reduces the number of urgent and emergency service calls, keeping maintenance personnel from being in a constant “fire-fighting” mode.

- **PM** - Preventive maintenance is the systematic and periodic inspection and servicing of plant assets based on elapsed time or hours of service required to keep assets in proper operating condition. MACs for PMs are typically based on manufacturer's recommendations, industry standards, and conditions unique to the operating environment of the plant asset.
- **PDM** - Predictive maintenance is a pro-active approach to maintenance where equipment conditions are monitored along with data tracking and trending to predict failures and avoid equipment breakdowns. Condition monitoring information is gathered from vibration analysis, ultrasound detection, visual inspections, and other non-destructive testing. A PDM technician and utility engineer track the severity of problems, order necessary parts, and schedule maintenance, usually during the next scheduled maintenance period or immediately, depending on the severity of the problem. PDM is also used in commissioning new or replaced equipment to detect problems prior to returning equipment to service or accepting contracted services.

A properly balanced program of preventive and predictive maintenance avoids costly breakdowns, reduces maintenance requirements, helps reduce excessive spare parts inventories, and results in longer equipment life.

- **Housekeeping** - Good housekeeping is essential for safe and efficient plant operations. Corix will implement a systematic program to organize stores and clean all plant areas, dispose of unneeded equipment and materials, and designate storage locations for tools and equipment so that they can be readily located when needed. We will ensure that all hazardous materials are properly labeled and stored in approved containers and quantities are limited to those required to meet work requirements.

### 3.5 WATER TREATMENT AND DISTRIBUTION SYSTEM – OPERATIONAL STRATEGIES

The water treatment and distribution systems consist of treatment plants, source wells, potable water mains and customer service connections.

The age of the water system components varies with location. The Operation Plan for the water treatment and distribution systems includes the following main objectives.

- Regular operation and maintenance of the treatment plants
- Regular maintenance and inspection of pipelines and valve boxes.
- Perform an annual replacement program.

These objectives will be achieved by first concentrating on a study of the system and collecting data, comparing and learning from current operations and only then introducing more effective or more efficient processes that have been beneficial elsewhere.

### 3.6 WATER TREATMENT AND DISTRIBUTION SYSTEMS – INITIAL ACTIVITIES

A critical element in operating and maintaining the water treatment and distribution systems will be the review of the LCRA's GIS mapping of the system and the initial repairs to be completed as part of the initial capital improvements and enhancements.

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**3.7 WATER TREATMENT AND DISTRIBUTION SYSTEMS – WORK CREW ACTIVITIES**

A field crew will be tasked with performing construction related water utility work. This group will work in conjunction with plant personnel to carry out the O&M responsibilities. The field crew will be responsible for handling service responses such as line locates or emergency watermain breaks along with implementing a line inspection and repair program.

**3.8 WATER TREATMENT AND DISTRIBUTION SYSTEMS – NEW TAPS AND CUSTOMERS**

Corix will routinely make new taps and install small line extensions.

**3.9 FEEDBACK AND PROCESS IMPROVEMENTS**

An overview of Corix feedback and process improvement is presented in Table 1.

The LCRA can provide feedback to us by e-mail, telephone, or fax. Customer complaints or any other issue communicated by the LCRA requires documentation and tracking and will also be entered into the corrective and preventive action system.

Key features of this process described in Table 1 are based on the following principles:

- Identifying issues, non-conformances and deficiencies wherever they are found, including processes to input complaints into the system.
- Investigating and determining the root cause of the issue.
- Initiating actions designed to permanently correct the issue.
- Evaluating the effectiveness of the actions implemented.

The issue will be forwarded to the responsible supervisor for research and resolution as outlined above and the results forwarded to the Manager of Utility Operations for review. The completed investigation and action plan will be forwarded to the LCRA. The Manager of Utility Operations will conduct a follow up on corrective action to ensure that the actions stated were implemented and effective in alleviating the issue.

These surveys will be available for review. Standard compliance will be measured by inspection and periodic testing of the distribution system, review of outage and other maintenance records as well as a customer survey that will be conducted annually.

Feedback will be a daily consideration in that Corix will staff a Customer Care center during regular business hours (8 am – 5 pm), Monday to Friday, to receive service call requests and customer complaints. Every request will be handled and responded to in accordance with Corix/LCRA requirements and established policies. The MIS will provide the tool for creating work orders with priorities to set response times. Each work order will be tracked to completion. Corix management will review work orders on a periodic basis and initiate corrective actions if required.

Annually, EPA requires the preparation and mailing of a Consumer Confidence Report (CCR) to the users of a public water system. This single report provides a snapshot of the previous year regarding water quality, results of testing during the year and any other items of interest to customers. Included in the CCR are not only results of water quality tests, but, a section regarding information on the parameters used in the testing, a section informing the customers who to call in the event of a problem and water conservation tips. The reports have been well

received by customers as well as the regulatory agencies that have received copies. The CCR is an effective communication tool.

All processes utilized by Corix will be documented by SOPs. Process improvement will be continuous and based upon all feedback including feedback from all employees of Corix, subcontractors and third party sources, including LCRA staff.

### **3.10 WATER SYSTEMS – INSPECTIONS AND QUALITY ASSESSMENT PROCEDURES AND TECHNIQUES**

Inspection schedules and surveillance checklists will be developed for each utility system maintenance and operations element described in the Operating Plan and for each major capital improvement project. The Manager of Utility Operations or designee will conduct a 10% surveillance inspection to ensure that all performance requirements are met. Performance requirements will be determined by the utility system or the characteristics of the item to be inspected.

Inspections schedules and checklist criteria will be reviewed and approved by the Manager of Utility Operations prior to implementation. The completion of scheduled inspections will be conducted by the assigned inspector and tracked by the responsible supervisor. Inspections not completed within the timeframe indicated will be reassigned and the reason for not being completed researched and resolved.

Inspectors will be trained and qualified to perform the inspections they are assigned. Qualifications include having the knowledge and experience regarding the equipment or operation they are inspecting, being familiar with the inspection procedure, and having the maturity to perform their tasks in a professional manner. They will review inspection and surveillance schedules and perform assigned inspections accordingly, reporting any discrepancies or non-conformance to the responsible supervisor who will review findings and initiate corrective action as required. O&M inspectors have the authority to stop activities if they feel they violate the health, safety of plant personnel or the efficiency of operations.

Periodic audits and assessments of the utility operations and administrative functions to evaluate the level of effectiveness and implementation of procedures and processes will be established to satisfy requirements. This includes project procedures and plans developed and approved in accordance with contract requirements. Inspectors that serve as auditors will be trained in the audit process and reports of their activities and findings will be provided to the Manager of Utility Operations. Corrective action will be taken on any findings of non-conformance. Inspectors will also have the authority to stop any activity that they feel may threaten the health and safety of utility personnel or the efficiency of operations.

Major capital improvement projects inspection plans will be reviewed and approved by the Manager of Utility Operations with input from the LCRA as to the inspection criteria prior to being implemented.

For each definable feature of work established by the Manager of Utility Operations or designee, the following events could be included in the inspection/quality assessment:

1. Confirmation that the appropriate technical specifications are incorporated into the project delivery plan and review said specifications.

2. Confirmation that the appropriate contract drawings are incorporated into the project plan and review said drawings.
3. Verify that all shop drawings and submittals have been approved by the proper approving authority (including factory test results, when required).
4. Confirm that the testing plan coincides with the delivery plan and that adequate testing is called for to assure quality delivery.
5. Confirm definition of preliminary work required at the work site and examine the work area to confirm required preliminary work has been properly completed.
6. Confirm availability of required materials and equipment. Examine same to confirm compliance with approved submittals. Examine mock-ups and any sample work product to confirm compliance with approved submittals.
7. Review the site safety plan and activity hazard analysis to ensure that safety concerns are adequately addressed and applicable safety requirements have been incorporated into the plan. Confirm that the appropriate material safety data sheets (MSDSs) have been identified and properly submitted.
8. Discuss construction methods to be employed during the remedial action. Identify checkpoints and areas of evaluation that will allow determination that the appropriate quality of construction is being achieved.

The Manager of Utility Operations will monitor performance of all utility systems under his purview through a review of reports, operating parameters of equipment, work order status and accomplishment of Repair and Replacement projects.

### **3.11 WATER TREATMENT AND DISTRIBUTION SYSTEMS MAINTENANCE REQUIREMENTS**

Corix intends to employ a RCM approach for accomplishing Water Treatment and Distribution System maintenance requirements. Using the RCM approach, each treatment distribution system and equipment asset is analyzed to determine the most appropriate levels and types of maintenance, i.e. preventive, predictive, or breakdown, based on asset criticality, impact of failure, and costs/benefits, that are needed to meet performance and reliability requirements. In addition, we will optimize reliability by performing systematic condition assessments of all systems to evaluate not only physical conditions, but also system age with respect to lifecycle costs, service call histories, operating environment, and criticality to operations. While Corix recognizes the diverse weather conditions in Central Texas, the data gathered during the condition assessments will take into consideration the local operating conditions, and then provide the analyzed recommendations for the planned maintenance program. An asset maintenance program may employ a pre-emptive predictive testing and inspection maintenance approach, a time interval maintenance approach such as scheduled preventive maintenance, a run to failure breakdown maintenance approach, or a combination of these maintenance strategies.


The realization of the RCM approach is accomplished through a knowledgeable and experienced team of (PM/PDM) mechanics and technicians, coupled with the technical assistance of plant engineering. Our experience has shown that a planned RCM approach not only significantly improves maintenance work order completion rates, but also reduces the

number of urgent and emergency service calls, keeping maintenance personnel from being in a constant reactive mode.

### **3.12 WATER SYSTEM – RECORDKEEPING PROCESSES**

Corix, the LCRA, regulators, and other parties need timely access to specific utility information. Corix will implement effective tools and processes to manage information in a variety of formats and media to ensure that accurate, complete and accessible records are maintained. Table 7 shows the types and formats of information retained. The types of information will evolve and grow from contract award as capital improvement and renewal and replacement projects are designed, constructed, and operated.

As a general rule, data will be archived electronically and kept indefinitely. We will maintain compact disks, DVDs or other similar media at a secure offsite location. Records will be kept a minimum of 2 years, and then archived at an offsite storage area. As system upgrades and expansion activities take place, the system inventory and asset valuation will be updated and kept current with renewal or depreciation of the assets. Corix will maintain this database electronically so that the asset value can be tracked on an annual basis, or more often if required.




It is anticipated that our continued maintenance and service of the utility systems will provide additional information on the location of utilities. This information will be input to the GIS and the resultant maps will be updated periodically so our maintenance crews will have up-to-date information in the field and ensure that the documented system configuration is as accurate as possible. Corix will also provide information to allow for updates to the Municipality GIS on an annual basis.

Corix will maintain record drawings for all existing and new facilities installed by Corix within its service area. The LCRA will have access to use and copy such drawings. Corix will provide available drawings to the LCRA in the form of Computer Aided Design-Computer Aided Manufacturing (CAD-CAM) disks using the latest release software compatible with LCRA systems.

A water treatment and distribution utility produces substantial amounts of data and information in various formats. These records will be used for day-to-day O&M management needs as well as other issues ranging from regulatory reporting to client reporting. Permanent records will be kept as part of the Operating Plan, including:

- Asset inspections
- Asset condition
- Networks drawings
- Manufacturers' manuals
- Test and inspection sheets
- Commissioning reports
- O&M procedures
- Reporting and coordination



Based on the information recorded, a system of regular reporting will be established in order to keep our O&M team up-to-date on the performance of the project. Information will be drawn from up-to-date computerized databases produced by our personnel and collated into a



readable and useable format. The data assembled will be used for information and asset management.


Various documents will be produced to keep the LCRA informed and to fulfill Regulatory requirements, including:

- Registries (registry of assets, accounting records and books, personnel registry, registry of operations and non-compliance events, logbooks).
- Inventory of assets and evaluation of their condition and operations.
- Reports on the O&M activities on site.
- Reports related to implementation of Regulatory Mandates.
- Service quality periodic reports.

It is important that we are actively involved in the commissioning and operation of new works in the water treatment and distribution systems to ensure that the new assets comply with Corix standards.

### **3.13 WATER SYSTEM – ENVIRONMENTAL SAFETY AND HEALTH COMPLIANCE PLAN**

The water treatment and distribution systems will conform to all environmental permit requirements as specified by both EPA and the State of Texas.



The operator certification for the water distribution systems will be in accordance with the TCEQ operator certification program for the State of Texas. The system rating will determine the level of certification the operators must possess. It is our policy that all operators working on the water treatment or distribution system will attain and maintain their required certifications as a condition of employment. Periodic continuing education credits are required and those training sessions are reported and approved by the TCEQ training manager.

Drinking water standards will be maintained in accordance with the EPA guidance on drinking water. Routine testing of water quality will be performed by the assigned treatment plant operators as well as confirmatory independent testing by a non-affiliated, state accredited lab. Water quality will be monitored by the Manager of Utility Operations and that information will be provided to the LCRA representatives. An annual water quality report (CCR) will be prepared and distributed to the LCRA as required by the EPA.

**Environmental Compliance Manual** - Operators will be provided with an Environmental Compliance Manual, which sets forth all aspects of environmental compliance. The Corix policy is 100% compliance. Since regulations and requirements are not static, and as regulations and requirements change, compliance procedures may change as well. Regular additions, updates, or reviews of material will be made to the Environmental Compliance Manual throughout the program.

**Safety Management** - Program materials and team coordination and training are maintained by the Corix Environmental and Safety department. Regular reviews and feedback from each audit conducted, result in constant refinement of auditing materials and checklists.

Health and Safety tasks include:

- Monthly inspection of fire extinguishers, including recharge or shop testing if required.

- Monthly advance reminders to compile and evaluate data for regulatory report submission.
- Monthly reminders to fill out and submit reports with specific instructions, timed for each specific report due date.
- Annual reminders for regulatory agency reporting.
- Periodic reminders to review specific programs for effectiveness and to ensure the information and procedures they contain are current and applicable.
- Audit and review reminders to ensure that applicable programs are being utilized properly and effectively.

These are Safety task examples, and the actual list is comprehensive to ensure compliance with all possible issues arising out of OSHA and the Corix guidelines and regulations.

**Internal Report Card of Quality** - Corix has an internal reporting process to provide a standardized and effective means to document and inform upper level management about incidents and near-miss incidents involving compliance and safety.

Whenever an incident or even a recognized near-miss occurs, it is documented. This documentation also functions as a checklist to assist the supervisor in taking the correct actions for addressing a specific incident. The documentation addresses virtually every conceivable incident including permit exceedances, injuries, inspection deficiencies, agency and client dissatisfaction notifications, traffic accidents, and a variety of others, including near-miss situations. Some of the benefits the system provides include:

- Quick, easy and consistent data entry and checklist type assistance with incidents and events.
- Quick, efficient routing and reporting using electronic means. Routing is in parallel rather than sequential.
- Provides for detailed data collection for each type of incident or event without adding complexity.
- Elimination of duplicate data entry.
- Automated development and compilation of a database of all incidents and events, including near-miss events, to aid in analyses of trends and history.

**Documentation** - Corix's contracted Laboratory will have a QA/QC Program to provide the assurance that all analytical procedures comply with regulatory requirements and also ensures that proper documentation has been kept providing legally defensible data as per state and federal requirements. This data can be tracked from cradle to grave through the following processes:

- Sample collection in the Chain-of-Custody bound book.
- Preservation in the Chain-of-Custody and analytical bound books.
- Analytical methodology and procedures in the analytical bound books.
- Daily laboratory equipment maintenance and calibration in a bound book.
- QA/QC plotting of precision and accuracy data in a bound book and on a graph.
- Data validation documented in analytical bound books.
- Database data entry validated on data entry forms.

Drinking water standards will be maintained in accordance with the EPA guidance on drinking water. Routine testing of water quality will be performed by the assigned operators as well as

confirmatory independent testing by a non-affiliated, state accredited lab. Water quality will be monitored by the operators and that information will be provided, when requested to the LCRA by the Manager of Utility Operations. An annual water quality report (CCR) will be prepared and distributed to all water customers as required by the EPA.

**Clean Water Act Permits and Compliance** - Industrial wastewater discharges are regulated under any pre-treatment permit issued. Customers are expected to adhere to the wastewater discharge plan and consult with Corix/LCRA environmental staff to ensure that the facility as a whole remains compliant with the pre-treatment permit.

### 3.14 PERFORMANCE STANDARDS AND/OR SPECIFICATIONS – WATER

It is Corix standard procedure to implement verifiable performance measures in providing utility services to the LCRA. Performance standards and/or specifications for the provision of the proposed utility services are highlighted in Table 8 and include our proposed performance standards. Corix has developed benchmark standards for those metrics. The performance standards are as follows:

**Reliability** - Water system reliability is the measure of the number and duration of incidents that result in the water demand of the customers not being met by the system.

**Outage Response** - The Manager of Utility Operations will track the response time to plant outages. A response time goal will be established that meets the requirements of the LCRA and mutual tracking and discussions will be held to ensure that the LCRA's satisfaction is achieved.

**Planning: Water Demand Projection versus Capacity Projection** - A one-year and a five-year "water budget" planning process will be established. The information will be provided to the LCRA for use in planning. The water budget will include projected loads for each month based upon past performance and known future events or forecasts that will affect the loads. Balanced against this projected load will be a forecast of projected plant capacity, taking into account equipment planned outages and forced outage assumptions. A forecasted excess capacity factor will be calculated and internal goals for excess capacity will be made and tracked.

**Planning: Capital Improvement Plan (CIP)** - A one-year and a five-year "Capital Improvement Plan" formal planning process will be established. The information will be provided to the LCRA for use in planning. The CIP projects and major planned outages including cost details will be presented. The CIP will include a cost/benefit analysis for each budget request and must meet internal payback or return criteria.

**Planned Maintenance** - Planned outages of equipment will be established based upon manufacturers recommended maintenance procedures and past performance experience. These outages will also take into consideration the projected load demand of the plant. These outages will be planned well in advance and parts and materials will be delivered to the plant to support the outage schedule. Original Equipment Manufacturer (OEM) support will be utilized as required. Detailed records will be kept for each Planned Outage and an outage report will be made available to the LCRA.

**Corrective, Preventive, and Predictive Maintenance** - The maintenance program will be established to minimize breakdown or CM and maximize PM and PDM activities. A work order

system will be implemented so that all maintenance activities, man-hours, and material costs can be tracked by equipment or unit and categorized as CM, PM or PO. A CM/PM goal will be established and tracked. Maintenance costs for each piece of major equipment will be tracked to allow informed decisions by management regarding equipment upgrades or replacement.

**Environmental and Operating Permits** - Where applicable, Permits in effect will be transferred from the LCRA to Corix. Any permit modifications or new permits required will be applied for in a timely manner and in accordance all applicable state and federal laws. The Corix Environmental Department will have responsibility for this function. An annual environmental goal will be set for each facility and will be focused on reducing the number of reportable environmental events.

**Hazardous Materials (HAZMAT) and Inventory Control** - A HAZMAT program will be established that meets all applicable federal and state regulations. This program will fall under the Corix Environmental Department.

**Color Code Identification and Marking** - The standard color code requirements will be adopted with all piping, equipment, and wiring marked and color coded to comply with applicable requirements.

**Inspections and Reporting** - Corix will comply with all LCRA requirements for facility inspections and reports. In addition, Corix will conduct internal audits of all compliance areas as well.

Table 8: Performance Standards for the Water System

WATER SYSTEM			
Measure	Performance Standard	Performance Indicator	Work Description
Quality	According to AWWA potable drinking water standards	Corix QA / QC plan, available for inspection and audit	All standards and variables will be tested, monitored, and recorded
Reliability	Total system forced outage.	Real time outage tracking with outside audit as needed.	Reliability targets will be established based upon known industry standards.
Recurring and Preventive Maintenance	A PM verses corrective maintenance target will be established	LCRA audit of maintenance records	Condition-based maintenance management system to schedule, track and analyze
Sampling / Analysis	According to the Corix QA / QC plan.	Test data is available for inspection and audit.	Test data will be recorded in hard copy manuals, validated data will be stored in as a computer record.
Maintaining System Pressure	According to design and site specific requirements	Pressure data will be recorded by remote meters and field (manual) meters.	Field data will be recorded in hard copy manuals, historic data will be stored in as a computer record.

WATER SYSTEM			
Measure	Performance Standard	Performance Indicator	Work Description
Demand and Distribution Capacity	An annual water budgeting process will be established	An annual presentation of the water budget will be made	A formal energy demand projection vs. capacity process will be established
Water Storage Requirements	According to mandated design and site specific requirements	Requirements for storage kept within normal operating ranges.	Field data will be recorded in hard copy manuals, historic data will be stored in as a computer record.
Fire Flow Capacity/ Duration	If applicable, according to mandated UFC design and site specific requirements	Test data from hydrant flow testing will be recorded and available for audit.	Flow data will be recorded in hard copy manuals, historic data will be stored in as a computer record.
Corrosion Control	Industry Standard	LCRA audit and water consultant reporting	Water quality is key to the long term performance
Minimization of Water Use	Water losses will be monitored and measured (where possible)	Recordable incidents of water loss will be documented.	Pipelines and valves will be regularly checked and inspected.
Safety of Plant and LCRA Property	A safety target has been established based upon OSHA standards	LCRA audit of safety records	Personnel safety will be a top priority. Proper advance notification of public safety and affected parties, municipality of proper temporary facilities and controls, maintain OSHA compliance, complete site restoration and cleanup.
Service Connection Standards and Specifications	According to State and Corix standards	Service connections are available for review and inspection at any time.	All new connections will be performed per approved specifications and documented in the GIS system
Exterior Backflow Prevention	According to Corix standards and AWWA	Backflow preventers test reports available for review	All testing and installations will follow Corix's and/or the LCRA's Cross Connection Control Program Standards
Water and Sewer Line Separation	According to TCEQ and Corix Standards	TCEQ approval to operate	All water and sewer separation according to the TCEQ approved plans and documented in the GIS system.

WATER SYSTEM			
Measure	Performance Standard	Performance Indicator	Work Description
New Construction Standards	According to TCEQ and Corix/LCRA Standards	New construction project plans are available for review and inspection at any time.	All new construction will be performed and inspected per approved specifications and plans documented in the GIS system.
Commissioning Standards	According to Corix standards, TCEQ and AWWA	Commissioning procedures are available for review and audit.	Actual commissioning procedures will be documented and retained as a historic record.
Color Identification and Markings	OSHA and AWWA standards	Utility engineering and annual inspections	Equipment will be color coded and marked per OSHA and AWWA standards
System Inspections	As required by Federal State, and local standards	Utility engineering reviews	Annual inspections will be performed on all major equipment, industry standard inspection to confirm proper operations of electrical components. facilities will be open for inspection at any time
Meter and Equipment, and Calibration	According to AWWA requirements	Meter operation and calibration procedures are available for review and inspection.	Metering equipment and calibration procedures will be part of the Corix MIS program
Service Interruption Frequency	Response times for numbers and duration of system service interruptions and outages.	Real time outage tracking with outside audit as needed.	Internal targets have been established with any LCRA standards included. Supervisor will conduct root-cause analysis to determine the cause of service outages and interruptions and take corrective action to reduce system deficiencies
Operating Permits	Established by Permit	EPA and state review and notice. The LCRA will be kept informed of all issues	An environmental compliance goal have been set and all permits will be obtained as required
Employee Certification	Targets of number of qualified employees for each classification will be set	Annual and semi-annual review of employee qualifications	A formal training program has been established with qualifications for each classification defined.

WATER SYSTEM			
Measure	Performance Standard	Performance Indicator	Work Description
Disaster Recovery	According to Federal State, and local requirements	Review of disaster recovery and contingency plans	Follow through with plans and exercises for disaster preparedness to be able to recover and resume operations in the event of an emergency.

### 3.15 OPERATIONS ACTIVITIES

The operation of the wastewater treatment plants and collection systems will involve a number of activities, including:

- Lift Station operation
- Wastewater treatment plant operations and maintenance
- Underground Collection System
- Compliance Sampling
- Local Metering and Remote Monitoring
- GIS Mapping
- Equipment Maintenance
- Risk Management
- Health and Safety
- Community Outreach

**Treatment Plant and Collection System Maintenance Requirements** – Corix intends to employ a RCM approach for accomplishing WWTS and WWCS maintenance requirements. Using the RCM approach, each plant and collection system and equipment asset is analyzed to determine the most appropriate levels and types of maintenance, i.e. preventive, predictive, or breakdown, based on asset criticality, impact of failure, and costs/benefits, that are needed to meet performance and reliability requirements. In addition, we will optimize reliability by performing systematic condition assessments of all systems to evaluate not only physical conditions, but also system age with respect to lifecycle costs, service call histories, operating environment, and criticality to WWTS and WWCS operations. The data gathered during the condition assessments will take into consideration the local operating conditions, and then provide the analyzed recommendations for the planned maintenance program. An asset maintenance program may employ a pre-emptive predictive testing and inspection maintenance approach, a time interval maintenance approach such as scheduled preventive maintenance, a run to failure breakdown maintenance approach, or a combination of these maintenance strategies.

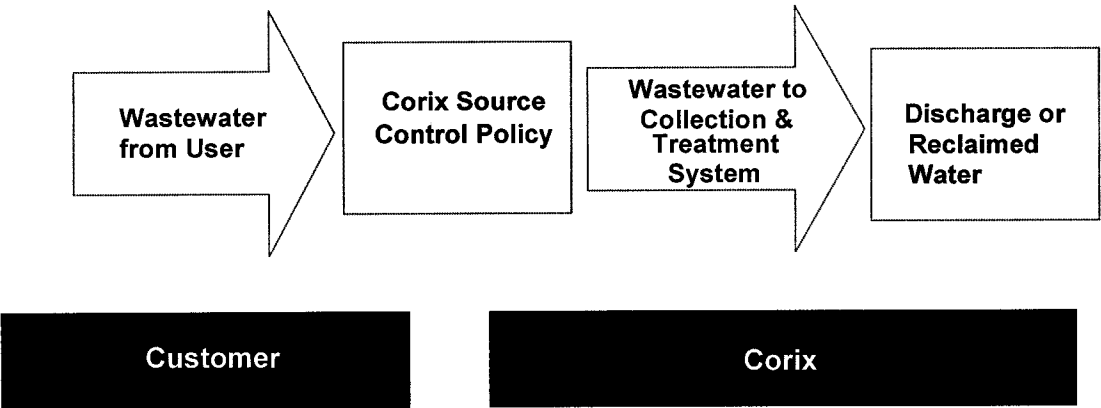
The realization of the RCM approach is accomplished through a knowledgeable and experienced team of (PM/PDM) mechanics and technicians, coupled with the technical assistance of plant engineering. Our experience has shown that a planned RCM approach not only significantly improves maintenance work order completion rates, but also reduces the number of urgent and emergency service calls, keeping maintenance personnel from being in a constant reactive mode.

All teaming partners are intimately aware of the critical operating requirements and demands placed on the WWTS and WWCS. Collectively, our team fully understands the importance of these critical systems. Corix clearly has demonstrated its understanding of similar conditions through our prior work experience. Corix, through our teaming partners have extensive experience in operating wastewater systems in difficult conditions and fully understands the nature of the LCRA and related utility infrastructure.

**Wastewater Use Policy.** Corix will implement a Wastewater use policy to maintain regulatory compliance at all times. We also understand that unregulated discharges to the wastewater system may have created problems in the past for the WWCS. Corix will monitor the types and amounts of waste products that are discharged into the wastewater collection system. Large amounts of grease, oil, metals, toxic pollutants, or unnecessary volumes of water can result in the violation of limits on discharges into the municipal system.



Figure 12: Environmental Compliance for Wastewater Collection System



**3.16 WASTEWATER – ENVIRONMENTAL SAFETY AND HEALTH COMPLIANCE PLAN**

The wastewater treatment and collection systems will conform to all permit requirements as specified by both EPA and TCEQ. Corix will coordinate with the LCRA/TCEQ to determine if changes to the permit parameters are required prior to the issuance of a new permit.

By periodic testing of the effluent, we will ensure the performance of the wastewater collection process is in compliance with all established directives.

The operator certification for the wastewater treatment and collection systems will be in accordance with the TCEQ operator certification program. The system rating will determine the level of certification the operators must possess. It is our policy that all operators will attain and maintain their certifications as a condition of employment. Periodic education credits are required and those training sessions are reported and approved by the Corix environmental training manager.

**3.17 PERFORMANCE STANDARDS AND/OR SPECIFICATIONS – WASTEWATER**

It is our standard procedure to implement verifiable performance measures in providing utility services. Corix has developed benchmark standards for those metrics. The performance standards for wastewater are as follows:

**Quality** - Overall service quality is partly measured by the frequency of service outage events, the preventive maintenance program, which is designed to keep the system in proper working order, and by the components used in maintaining the system.

**Recurring and Preventive Maintenance** - All maintenance will be done in accordance with manufacturer and industry standards. Preventive maintenance is the key to reliability and quality of effluent from the wastewater system. The maintenance system is designed to remind staff what work to do and track system results so they can be used to better predict future

needs. The operations plan will explain the computerized software used to manage the preventive maintenance program. This system is used also to track and notify staff of all types of routine requirements such as motor maintenance at a plant or preventive cleaning of sewer and storm water lines to prevent backups.

**Sampling and Analysis** - The sampling will be performed in accordance with State, Federal and industry standards. The sampling and analysis will be split between the on-site staff and a contract laboratory. The use of an outside lab provides a degree of separation of duties and independent verification of performance. Any lab testing will follow standard guidelines and the Quality Assurance/Quality Control program outlined in the Quality Control Plan. This plan has proven effective by the success we have had in passing EPA laboratory inspections.

**Demand and Collection Capacity** - Inflow and infiltration studies of the sewer system can be used to establish the condition of the wastewater system.

**Corrosion Control** - Most corrosion occurs because of hydrogen sulfide gas generated in the collection system. Every effort will be made to reduce the sulphide gas concentration by either chemical or mechanical means.

**Minimization of Inflow and Infiltration** - The system will be put on a schedule whereby on-site personnel will perform regular inspections. Corix will be repairing leaking manholes, requesting from the corresponding customers the elimination of storm drains or down spouts hooked into the sanitary system and identifying abandoned lines. A fixed line rehabilitation and replacement program will be budgeted to address these problems as required.

**Safety** - A performance indicator of safety is the incident reporting level. The Safety Plan provides an explanation of the safety procedures Corix will follow.

**Service Connection Standards and Specifications** - The service connections will be installed in accordance with State, Federal and LCRA standards.

**Blockages and Back-ups** - The collection can have periodic blockages for a number of reasons. These will be entered into our maintenance program and tracked. The information will be used to target locations where line cleaning will be made on a periodic basis to eliminate any future problems. An example for the sewer system is restaurants which have grease traps. SCADA is proposed to be installed at each of the lift stations (if not already installed) to quickly alert staff to a possible back-up condition, leading to an overflow of the system.

**Water and Sewer Line** - Minimum standards are set by the TCEQ and the EPA. Additional standards from AWWA, American Society of Civil Engineers (ASCE), NFPA, Factory Mutual and underwriters laboratory (UL) standards also apply.

**Separation** - The primary concern is to separate stormwater flows from the sanitary sewer. The use of smoke and dye testing can locate these interconnections.

**New Construction Standards** - All new construction will follow at a minimum, AWWA and ASCE, Factory Mutual and UL standards. New water and wastewater facilities constructed by Corix would have to be approved by the TCEQ for design.

**Commissioning Standards** - Any new construction will be installed, inspected and tested in accordance with federal; state and industry standards.

**Color Identification and Markings** - Line identification is carried out by our certified operators due to the critical nature. The process follows national standards.

**System Inspections** - The sewer collection system will have a detailed analysis performed in the first two years. This activity will include smoke testing and CCTV inspection of the worst sections.

**Meter and Equipment Calibration** - All equipment including meters is put into a computerized maintenance program, which helps tracks preventive maintenance. This program is discussed in the Operations Plan.

**Service Interruption Frequency** - The object is to eliminate any service interruptions and, if one occurs, minimize its affect on the customers and the environment. A service interruption plan is proposed. These will be tracked and with regular line cleaning will be used to prevent recurring problems.

**Employee Certifications** - Corix will staff the Wastewater Treatment and Collection System with certified employees as required by the State.

Table 9: Performance Standards for the Wastewater System

WASTEWATER SYSTEM			
Measure	Performance Standard	Performance Indicator	Work Description
Effluent Quality	According to TCEQ effluent standards	Corix QA / QC plan, available for inspection and audit	All standards and variables will be tested, monitored, and recorded
Reliability	Total system forced outage.	Real time outage tracking with outside audit as needed.	Reliability targets will be established based upon known industry standards
Recurring and Preventive Maintenance	A PM verses corrective maintenance target will be established	LCRA audit of maintenance records	Condition-based maintenance management system to schedule, track and analyze
Sampling / Analysis	According to the Corix QA/QC plan	Test data is available for inspection and audit.	Test data will be recorded in hard copy manuals, validated data will be stored in as a computer record.
Permitting	Established by regulatory agencies	State and Federal Review and Notice.	Corix will keep the LCRA informed about permit renewals
Demand and Collection Capacity	Established by system design	Hydraulic modeling as updated from time to time	Address capacity and demand difficulties through the CIP

WASTEWATER SYSTEM			
Measure	Performance Standard	Performance Indicator	Work Description
Pre-treatment Requirements	Established by pre-treatment permit	Inspection and Notice	Minimum standards must be followed
Corrosion Control	Industry Standard	Record Review or Third Party Verification	Regular inspections will be used to identify problems. Flushing and addition of chemicals to control corrosion
Minimization of Inflow and Infiltration	Established by industry standards	Inspection and Review of Construction Records	Minimum design standards must be followed
Safety of Personnel and LCRA Property	OSHA/Insurance Company	Federal and State Agency Inspection	Workers and contractors fall under state OSHA regulation and inspection. A safety program will be implemented. On-site performance judged by incident reporting system
Service Connection Standards and Specifications	Corix/LCRA, State and Federal Standards	LCRA/State compliance	Minimum state design standards must be followed
Blockages and Cross Connections	State Standards	Facility review	Regular cleaning will be used to minimize blockages and inspection will be used to locate cross connections
Water and Sewer Line Separation	According to TCEQ and Corix Standards	TCEQ approval to operate	All water and sewer separation according to the TCEQ approval plans documented in the GIS system.
New Construction Standards	According to TCEQ and Corix Standards	New construction project plans are available for review and inspection at any time.	All new construction will be performed and inspected per approval specifications and plans documented in the GIS system.
Commissioning Standards	According to Corix standards, TCEQ and AWWA	Commissioning procedures are available for review and audit.	Actual commissioning procedures will be documented and retained as a historic record.

WASTEWATER SYSTEM			
Measure	Performance Standard	Performance Indicator	Work Description
Color Identification and Markings	OSHA and AWWA standards.	Utility engineering and annual inspections	Equipment will be color coded and marked per OSHA and AWWA standards
System Inspections	As required by Federal State, and local standards	State Inspection and Notice	Annual inspections will be performed on all major equipment, industry standard inspection to confirm proper operations of electrical components, facilities open for LCRA Inspection at any time. State does inspections.
Meter and Equipment Calibration	According to AWWA requirements	Meter operation and calibration procedures are available for review and inspection.	Metering equipment and calibration procedures will be part of the Corix MIS program
System Service Interruption Frequency	Response times for numbers and duration of system service interruptions and outages.	Real time outage tracking with outside audit as needed.	Internal targets have been established with any LCRA standards included. Supervisor will conduct root-cause analysis to determine the cause of service outages and interruptions and take corrective action to reduce system deficiencies
Operating Permits	Established by regulatory agencies	Review and Notice	All standards and variables will be tested, monitored, and recorded.
Employee Certifications	State Regulations	State Notice	A formal training program will be established with qualifications for each classification defined.
Disaster Recovery	According to Federal State, and local requirements	Review of disaster recovery and contingency plans	Follow through with plans and exercises for disaster preparedness to be able to recover and resume operations in the event of an emergency.

**Wastewater Treatment and Collection System** - The use of dual qualified (water and wastewater) operators will allow more efficient use of the operator resources and will greatly enhance the responsiveness to either wastewater or water issues. Periodic training for all

operators will be scheduled. In addition to seasonal construction topics, classes in such matters as confined space training, competent man training, first aid/CPR, personal protective equipment, hazardous communications training and water distribution system maintenance will be offered to the operators. Training will be scheduled in a fashion that allows all operators to attend the training but still provide coverage.

**3.18 OTHER PERFORMANCE INDICATORS**

**Table 10: Preventive and Predictive Maintenance (PM/PDM)**

PREVENTIVE AND PREDICTIVE MAINTENANCE (PM/PDM)		
Measurement	Tracked Components	Remarks
Equipment Downtime Caused by Breakdown	Downtime Caused by Breakdown Compared to Total Downtime	Not greater than 5%
Emergency Man Hours	Man Hours Expended on Emergency Jobs Compared to Total Man Hours Worked	Not greater than 15%
Cost of Breakdown Repairs	Direct Cost of Breakdown Repairs Compared to Total Direct Cost of Maintenance	Not greater than 15%
Preventive Maintenance Compliance	Preventive Maintenance Tasks Completed Compared to PM/PDM Tasks Scheduled	At least 98% completion
Preventive Maintenance Estimates Compliance	Estimated PM/PDM Task Cost Compared to Actual PM/PDM Task Cost	Variance not greater than 20%
Breakdowns Caused by Poor PMs	Breakdowns Caused by Items That Should Have Been Serviced as a Part of the PM/PDM Program Compared to Total Number of Breakdowns	Not greater than 10%
Preventive Maintenance Efficiency	Total Number of work orders (WOs) from PM Inspections Compared to Total Number of Work Orders Generated	At least 60% of Work Orders are PM
Equipment Reliability	Equipment Operation Compared to System Run-Time Availability	Minimum 98% Reliability
Total Maintenance Labor Reported to a Work Order	Maintenance Labor Costs on WO's Compared to Total Maintenance Costs	No defined goal; expressed as a percentage for reporting purposes
Total Maintenance Material Costs Reported to a Work Order	Maintenance Material Costs on WO's Compared to Total Maintenance Costs	No defined goal; expressed as a percentage for reporting purposes

PREVENTIVE AND PREDICTIVE MAINTENANCE (PM/PDM)		
Measurement	Tracked Components	Remarks
Total Maintenance Contract Costs Reported to a Work Order	Maintenance Contract Costs on WO's Compared to Total Maintenance Costs	No defined goal; expressed as a percentage for reporting purposes
Maintenance Labor Costs Charged to a Standing or Blanket Work Order	Maintenance Labor Costs Charged to Standing WO's Compared to Total Maintenance Labor Costs	No defined goal; expressed as a percentage for reporting purposes
Material Costs Charged to a Standing or Blanket Work Order	Material Costs Charged to a Standing WO's Compared to Total Maintenance Material Costs	No defined goal; expressed as a percentage for reporting purposes
Percentage of Standing or Blanket Work Orders Written Against a Specific Equipment Item	Standing Orders Written for a Specific Equipment Item Compared to Total Number of Standing WO's	No defined goal; expressed as a percentage for reporting purposes
Percentage of Work Distribution by Type of Work Order	Preventive Work Orders, Corrective Work Orders, and Emergency Orders, Compared to Total WO's	Initial goal of 60% Preventive 25% Corrective and 15% Emergency Work Orders

### 3.19 OTHER STANDARDS AND SPECIFICATIONS

The following standards and specifications are applicable to the utility services that Corix will provide:

- Utility Hookup Standards
- Construction Standards
- Uniform Plumbing Code
- Professional Engineering Review

### 3.20 GENERAL HEALTH & SAFETY PRACTICES

Corix's approach to maintaining compliance with environmental safety is contained in OSHA regulations. This will be the standard to which we operate, maintain and construct the utility systems.

### 3.20.1 Employee Safety and OSHA Compliance

Corix brings a strong commitment to safety. The safety strategy recommended in this section consists of several distinct activities:

- Implement a comprehensive Safety Management program

- Develop a site-specific Safety and Health Plan, with safety procedures and systems to support Corix's safety program
- Train employees at all levels in regards to OSHA requirements
- Promote individual responsibility for Safety and Health standards in every task

### 3.20.2 Safety Management

Corix is committed to sound safety management principles that promote a zero accident philosophy inherent in all phases of work. The objective of safety management is to integrate safety, health and environmental protection into all work practices at all levels of the job task. The approach to a sound safety management program must include integrating safety into all aspects of the work. Corix will accomplish this objective by:

- Ensuring that employees take complete ownership of the Safety and Health Program; and
- Involving employees in the work planning process, development of the Safety and Health Program, and development and updating of procedures.

The Safety and Health Program will be tailored to specific activities and is essential to the success of this project. The program is used as a resource to help us accomplish our mission while integrating it into all levels of management and work practices to ensure the protection of workers, the public, and the environment.

Safety leadership starts with the total commitment to safety at the program level and flows down from the Manager of Utility Operations and to all workers. With this commitment, Corix will achieve excellence in all safety and health areas. It is imperative that employees take ownership of the Safety and Health program in order to obtain zero accidents and zero environmental incidents. Our Manager of Utility Operations is accountable for protecting the environment and the safety and health of every worker at the site. The safety and health of workers and the public are protected by identifying, analyzing, and mitigating hazards and implementing effective work practices. We will not compromise safety for the sake of any other objective.

Corix has the following responsibilities to its employees:

- The first responsibility is to involve all employees in the task or job, including planning, hazard identification, pre-job hazard briefing, and all aspects of the task or job performance.
- The responsibility of management is to ensure that all employees (labor, planners, supervisors, QA, and Safety and Health) are involved in all aspects of the job or task at hand. Management ensures that all work is performed within the controls that have been identified and continually reviews the job for any new hazards. Management will assign only qualified and appropriately trained personnel to perform the job or task.
- The responsibilities of the Health and Safety Coordinator is to review implementation of the safety program, to provide guidance on the selection and use of safe work practices and to help identify, analyze and mitigate hazards. Safety and Health personnel will be vigilant in providing oversight of work activities and will provide technical support and professional knowledge to the personnel performing the job.

Corix methodology to accomplish improvements in our safety program:



- Initial walk down of work site to understand what issues are present.
- The generation of a site specific Safety and Health Plan that is tailored to the needs of the work site and the implementation of revisions to the Safety and Health Plan that may be needed to address new or unrecognized work activities.
- The training of employees on the requirements and information included in the Safety and Health Plan as well as other mandated training.
- Regularly scheduled site/work area inspections that can lead to quick hazard identification and therefore control of these hazards.
- The hazard abatement Job Hazard Analysis/Pre-Job Hazard Briefing (JHA/PJHB) process which will need the input of all persons involved in the work being planned.
- Gathering and utilizing employee feedback to continually improve our processes.
- Employee empowerment - employees have stop work authority if safety or gross violations of work requirements occur.
- Employee involvement – employees are encouraged and may have company provided incentives to express concerns and to assist in the JHA/PJHB process.

By using the above mentioned procedures, Corix strives to continuously improve working conditions for employees, lower operating costs and maintain a workplace that is socially responsible.

### **3.21 SAFETY AND HEALTH PLAN**

The Safety and Health Plan will establish the work practices necessary to ensure the safety of all personnel throughout the contract.

At a minimum, the Safety and Health Plan will include a discussion of:

- Safety Requirements and Systems
- Hazard Assessment and Control
- Personal Protective Equipment
- Personnel Medical Surveillance
- Project Appearance and Housekeeping

The employees of the utility systems will be required to comply with all regulatory health and safety laws and any other local administration agency rules. We will develop specific safety requirements in each of the following areas, at a minimum:

- Confined space procedures and training
- Asbestos training
- Machine guarding
- Hazard Communications
- Non-potable water signage
- Inspections of safety and emergency equipment
- Personal protective equipment
- Walking and Working Surfaces
- Electrical Safety
- Security monitoring at booster and lift stations
- Housekeeping
- Blood-borne Pathogens
- Control of Hazardous Energy

- Excavation Safety
- Welding, Burning, and Hotwork
- Hazardous Material Safety
- Fall Protection
- Fire Protection
- Material Handling and Storage
- Hand and Powered Portable Tools
- Compressed Gases

There are various tools utilized by Corix for hazard identification:

- JHA and PJHB
- Informal discussions with the Health and Safety Coordinator
- Written work orders
- Safety inspections
- Work Plans
- QA and Safety Audits

As required by the Safety and Health Plan, Corix will develop a JHA for complex work that may introduce new hazards not previously addressed. These JHAs will provide a detailed, job-specific hazard assessment that addresses each step of the work process, the hazards involved, and the controls for those hazards. Employees who will perform the job tasks will participate in preparation of the JHA such that they can ensure that all necessary steps for completion of work have been identified and evaluated in addressing the appropriate measures to control or mitigate the hazards. As a part of this JHA, personal protective equipment (PPE) and applicable permits will also be identified.

Prior to start of work, the supervisor will complete a pre-job hazard briefing with all employees who are involved in the work activities. This briefing will be used to discuss the work to be performed, to identify the hazards, and to discuss the controls (e.g., procedures, permits, PPE) involved with the safe performance of work. This briefing will also serve as a forum for which employees can provide additional input on safe work performance by discussing lessons learned from prior experiences.

Because hazards contribute to accidents, injuries, and occupational illnesses, it is important to identify all hazards. Examples of hazards commonly associated with jobs are the following:

- The worker can be struck by, or strike against, or otherwise make harmful contact with an object.
- The worker can be caught in, by, or between objects.
- The worker can slip or fall.
- The worker can strain a muscle or joint by pushing, pulling, lifting, bending, or twisting.
- The worker is exposed to toxic gases, vapors, fumes, or particulates.

It is the responsibility of every Corix employee to identify and aid in the correction of all work area physical and behavioral hazards. Because each employee brings a unique set of skills and experiences to the work area, various employees can identify different potential hazards. Only through working together and combining all areas of expertise can we truly eliminate hazardous environments and behaviors. It is beneficial to look beyond the obvious hazards—at the entire environment—to discover every conceivable hazard that might exist. Note the

importance of examining health hazards as well, even though the harmful effects may not be immediate (e.g., the harmful effect of inhaling a solvent or chemical dust over a long period of time).

#### 3.21.1 Personal Protective Equipment

During new employee orientation, our employees will be provided initial PPE along with introductory training on the required PPE and how to use and maintain it in a sanitary and reliable condition. JHAs, SOPs, MSDSs, and site-specific plans identify the proper PPE that will be worn when conducting each task. In addition, the Manager of Utility Operations will ensure that each individual has the proper PPE and is trained in its use. Corix requires that annual refresher training be conducted on the proper wear and care of the PPE.

Typical PPE used by our staff for utility operations includes the following: hard hats, eye protection, face protection, level 'B' chlorine protective suits, ear protection, rubber gloves, electrical gloves and rubber aprons.

Therefore, we will provide the following equipment, as a minimum for the facility:

- Portable gas monitors for confined-space work,
- PPE as mentioned above,
- Confined space equipment,
- Traffic control equipment (cones, barricades), and
- Site-specific training tools (videos, training courses).

#### 3.21.2 Personnel Medical Surveillance

Pre-employment screening includes a mandatory drug test. Random company-employment drug testing is also standard procedure and will include all utility employees.

#### 3.21.3 Project Appearance and Housekeeping

One of the key issues in ensuring a safe and orderly work place is to maintain the facilities in a manner that always promotes safety. A work place that lacks proper housekeeping invites accidents and poor performance to standards. In Corix, proper housekeeping is required so that facilities are free of debris and equipment is properly maintained to minimize the potential for on-site accidents. Because even office environments are the sites of frequent safety incidents, our program emphasizes proper housekeeping there, as well.

#### 3.21.4 Health and Safety Training

Prior to commencement of site activities, the Health and Safety Coordinator will ensure that all new employees are informed of the nature and degree of exposure to hazards that are likely to result from performance of: work activities. Corix will accomplish this by ensuring that prior to performing any work activities all personnel entering the site have received the applicable OSHA and project-specific training required.

As an integral part of the overall training program for the utility systems, general and site-specific safety training courses will be introduced. Specialized courses such as Cardiopulmonary resuscitation (CPR)/first aid, hazardous materials handling, confined space entry, and others will be held to ensure that a safe, accident-free work environment exists. The emphasis will be on results, not training for training's sake.

Because safety must be a continuous part of every employee's daily activities, it is integrated into every part of the training program. In addition to the specialized courses and drills already described, safety tips, warnings and recommendations will be common elements of our SOPs. Special maintenance training will be held as assurance that proper tools and techniques are used at all times to avoid accident and injury.

The safety training program will be subject to initial assessment, planning, and re-evaluation. Safety training will be a primary responsibility of the Manager of Utility Operations, with the support and scrutiny of the Health and Safety Coordinator. It will be subject to the scrutiny of the Health and Safety Coordinator and to the policies of the Corix Safety Program to ensure that safety training is effective and proper resources are available. Training opportunities will include formal training classes, routine safety team meetings, safety newsletters, tailgate meetings, and other safety-related materials. Some examples of topics addressed in the safety meetings may include:

- Hazard recognition
- Individual responsibility
- Safety regulations
- Problem solving
- Chemical safety
- Material handling
- Safe work practices
- General employee safety and health
- Current working conditions
- Safety and Health Plan reviews
- Specialized topics such as confined space entry, lockout/tagout, etc.

#### 3.21.5 Responsibility for Safety and Health

Each employee is directly responsible for ensuring their own safety as well as the safety of other team members. Employees will be dedicated to establishing a safe environment in which work is performed without injury or illness to employees, visitors, or the public by complying with all LCRA, Federal, State, and local safety requirements, legislation, and regulations. However, the formal Health and Safety team begins with the Manager of Utility Operations who provides input into implementing Corix's safety program including procedures, policies, QA/QC, and planning and measurement systems. Our Health and Safety Coordinator and the Corix wide safety team offers assistance to support the needs of the project (training, analyzing, preventive, and technical support) in every aspect of the Safety and Health program.

A key aspect of our safety program is the oversight of the project by our Health and Safety Coordinator. The Health and Safety Coordinator is responsible for periodic safety assessments of the facility and follow-up reviews to ensure that all issues have been identified and addressed. He has the authority to enforce safety requirements for the Corix staff and facilities. During the transition to privatization, a detailed safety review will be conducted and the necessary safety equipment and facility improvements will be identified and acquired. The Health and Safety Coordinator will be directly involved in the start-up of the project, development of the Safety and Health Plan and training of the employees.

As part of our standard practice, we will conduct annual safety reviews of the facilities. This review will cover training records, site-specific safety plans, work environment and work

practices. A corrective action plan matrix will be finalized for a systematic approach to mitigate safety concerns in order to meet all OSHA, state, and local requirements for the project.

**Table 11: Corix Certification and Training Requirements  
as Part of Employee Job Description**

POSITION	RESPONSIBILITIES	CERTIFICATION & TRAINING
Supervisor Water/Wastewater Operations	<ul style="list-style-type: none"><li>• Performs routine process laboratory tests.</li><li>• Understands and carries out oral and written directions related to plant operation as directed by the Senior Utility Supervisor on shift for monitoring the distribution system operation. The work of this class is characterized by the responsibility for controlling the operation of pump stations, PRV's and other auxiliary equipment in a safe and efficient manner on an assigned shift.</li><li>• Direction is exercised over a varying number of lower level operators, the number being dependent upon staffing levels, as conditions and distribution requirements change. Work is performed with considerable independence under the direction of the Senior Utility Operator/Supervisor or designee.</li><li>• Work performance is reviewed through operational logs and conferences for safe, efficient, environmentally acceptable and economic operation of the system. Responsible for the operating log book.</li><li>• Determine the operational effectiveness of the various system equipment and machinery; identify trends in system production; control of the pressures and fire flows; directs other operators and other staff assigned to the operating crew and checks the operation of system equipment and machinery; monitors controls throughout the system; maintains an assigned section of the distribution system;</li></ul>	<p>Class B Water certification from Texas Commission on Environmental Quality</p> <p>Class B Wastewater Treatment certification from Texas Commission on Environmental Quality</p>

POSITION	RESPONSIBILITIES	CERTIFICATION & TRAINING
	and performs related work as assigned. There is exposure to weather, fumes, odors, dust and heat.	
Senior Water/Wastewater Operator	<ul style="list-style-type: none"><li>• Performs routine process laboratory tests.</li><li>• Understands and carries out oral and written directions related to plant operation as directed by the Senior Utility Supervisor on shift for monitoring the distribution system operation. The work of this class is characterized by the responsibility for controlling the operation of pump stations, PRV's and other auxiliary equipment in a safe and efficient manner on an assigned shift.</li><li>• Direction is exercised over a varying number of lower level operators, the number being dependent upon staffing levels, as conditions and distribution requirements change. Work is performed with considerable independence under the direction of the Senior Utility Operator/ Supervisor or designee.</li><li>• Work performance is reviewed through operational logs and conferences for safe, efficient, environmentally acceptable and economic operation of the system. Responsible for the operating log book.</li><li>• Determine the operational effectiveness of the various system equipment and machinery; identify trends in system production; control of the pressures and fire flows; directs other operators and other staff assigned to the operating crew and checks the operation of system equipment and machinery; monitors controls throughout the system; maintains an assigned</li></ul>	<p>High school diploma or GED plus two or more years experience in water/wastewater operations maintenance or construction. A valid driver's license is required.</p> <p>Class C Surface Water or Groundwater Systems certification from TCEQ in area of primary responsibility and Class D Wastewater Systems certification from TCEQ in area of secondary responsibility, with at least one in wastewater treatment or as required by the systems assigned to the operator.</p> <p>First Aid/CPR, asbestos awareness program, hazmat awareness course. Complete an approved confined space entry training program. Class B Commercial Drivers License where required for assigned vehicle operation.</p>

POSITION	RESPONSIBILITIES	CERTIFICATION & TRAINING
	section of the distribution system; and performs related work as assigned. There is exposure to weather, fumes, odors, dust and heat.	
Senior Utility Worker	<ul style="list-style-type: none"><li>• Perform all preventive and corrective maintenance on the water and wastewater systems and equipment.</li><li>• Plans, schedules and directs maintenance of a wide variety of specialized mechanical and electrical equipment plus buildings, structures and grounds.</li><li>• Coordinates the personnel and other resources required in the maintenance and repair of WWCS, WWTS and WD facilities.</li><li>• Reads, interprets and works from blueprints, drawings, sketches, plans, specifications and mechanical illustrations.</li><li>• Performs skilled mechanical repair work on WWCS, WWWS and WD motors, pumps and other equipment.</li><li>• Keeps records and prepares routine and special reports.</li><li>• Performs PM and CM on WWCS, WWTS, WDS, and related equipment.</li><li>• Performs general maintenance and repair tasks on buildings, structures and grounds.</li><li>• Communicate effectively at all levels regarding recommended maintenance and repair procedures.</li><li>• Analyzes equipment failures to determine cause and to prevent recurrences.</li><li>• This position is required to be on standby and work irregular hours.</li></ul>	Training provided in all disciplines required for the position. All staff reporting to project site will receive safety indoctrination.



POSITION	RESPONSIBILITIES	CERTIFICATION & TRAINING
<b>Water / Wastewater Operator Level 2</b>	<ul style="list-style-type: none"> <li>• Operate and maintain various service pumps and motors.</li> <li>• Maintains system records.</li> <li>• This position is subject to call out and maybe required to work irregular hours.</li> <li>• Determine the operational effectiveness of the various equipment and machinery</li> <li>• The lead operator directs other operators</li> <li>• There may be exposure to fumes, odors, dust and heat.</li> </ul>	<p>Class C Water Systems certification from Texas Commission on Environmental Quality in area of primary responsibility and Class C Wastewater Systems certification from Texas Commission on Environmental Quality in area of secondary responsibility, with at least one in wastewater treatment</p> <p>First Aid/CPR, Complete 8 hour asbestos awareness program. Possess and maintain a card for an 8 hour hazmat awareness course.</p>

### 3.22 CUSTOMER CARE & BILLING INITIAL OPERATING PLAN

Corix will perform the Customer Care and Utility billing functions on behalf of LCRA for approximately 2700 customers in the Hill Country and Southeast Regions. Corix is committed to providing a seamless transition and excellent service to its customers. To achieve this objective, CCB (Customer Care and Billing), Corix has hired staff currently with the LCRA doing this function today. A Customer Care Supervisor, one Customer Care representative and an Administrative assistant have been hired to handle the responsibilities as anticipated by the LCRA and the requirements of the Operating and Maintenance Agreement. This team will be located at the new Corix office on Bee Caves Road in Austin, Texas.

Regular weekly meetings have been held to address the various components of the CCB process. From the meter reads through to the payment process, all aspects of the 2 cycles including reporting have been addressed.

On July 2, 2012 the telephony equipment and programming of messages will be in place. Training on the equipment will take place prior to go live day. A state of the art VOIP telephone system allows redundancy in our center should the location go down due to an unplanned event such as an extraordinary storm event or natural disaster. In addition, it allows for expanded coverage hours to support customer needs. After hours emergency dispatch will be handled through LCRA dispatch during the O&M period.

CCB staff will utilize LCRA's current CIS Billing System and TAG to dispatch field operation activities and access real-time account and premise information. CIS is a web-based software program with numerous links that will allow a Customer Care representative to drill deeper into specific information about specific bills, meter reads, field activities, collection and severance processes that are displayed at a high level on the home screen. A Customer Care representative can review current and past customer contacts allowing them to answer customer questions that may have arisen previously. CIS allows field activity information at a customer premise to be stored indefinitely allowing Corix to act in a cost effective manner when considering repair or replacement of equipment or lines. In addition, Corix system automates field activity dispatching to allow the field personnel to complete field activities in a live environment so that Customer Care representatives/supervisors have the information available

as soon as the order is completed. This will allow Corix to accurately and quickly respond to its customers. Customer bills generated in CIS allow a customer to compare their consumption to prior months, as well as the same month from the previous year. This enhanced information allows customers the ability to review their account history, to make informed decisions about their service and to recognize changes in their service usage.

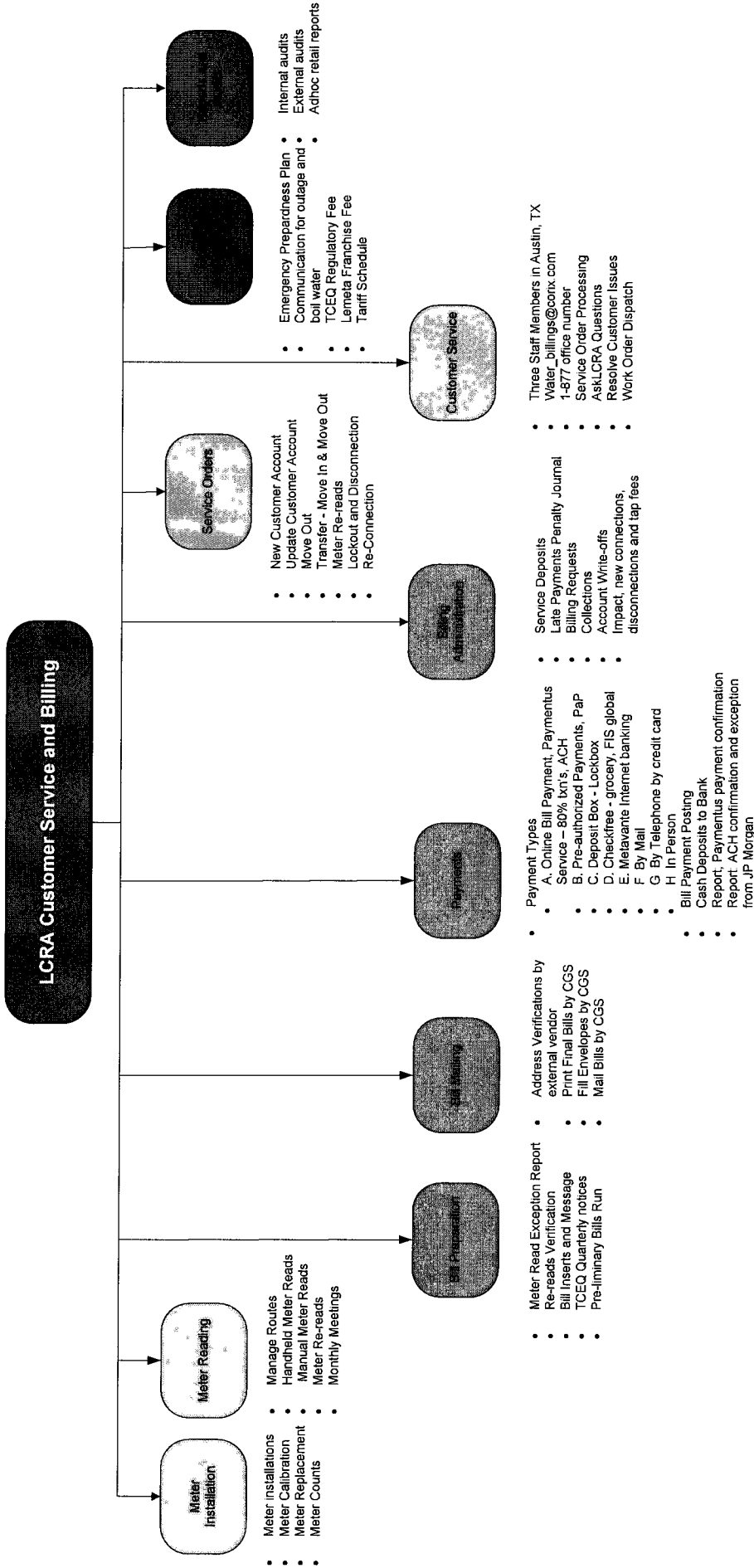
Although payment processing and posting will stay the same and will reside with LCRA, Corix staff will do the billing, take customer calls, and create service work orders. A new third party bill print provider has been selected: Infosend. A parallel run is planned in the month of July with go live in August.

Corix will continue to offer online services via LCRA's website during the O&M period. Online services will include:

- the application for residential and commercial service
- the updating of water service account information
- move out forms
- the transfer of water utility services
- on line bill payment
- tips on how to read your water meter



Figure 13: Customer Care and Billing



## **4 COMMUNITY OUTREACH PLAN**

### **4.1 COMMUNITY RELATIONS**

Community acceptance is essential in facilitating a prompt and streamlined transition of a public utility to private ownership. To achieve the community's confidence in Corix as a new owner/operator, we are committed to working with our partnering municipalities on extensive public and stakeholder communications. These communications are guided by requirements usually determined in consultation with our public partners during a transition period, recognizing previous established relationships and practices with its customers and other key stakeholders. The communications plan would be centered on our overall operational, integration, and financial plans, with specific details on our projections of utility rates required by Corix in order to continue to deliver the same level of reliability and safety that the LCRA currently delivers.

Some of the key components in our community relations and communications plans are:

- Research to gain understanding and insights into the priorities and needs of the community.
- Development of communications materials with appropriate messaging about Corix and the benefits of an investor-owned utility operation.
- Strategies for public engagement and elected official outreach through face-to-face meetings, digital and social media and media relations.

#### **Community Involvement**

We believe a strong community will support a strong and reliable utility. Corix and its employees support local charities and community groups in every region in which we operate. We also believe in supporting environmental and sustainability initiatives that align well with our core businesses. In our University of Oklahoma transaction that completed in 2010, Corix donated \$2 million to establish the Corix Institute for Water Resources and Sustainability, a research effort devoted to water sustainability in emerging and critical regions.



## EXHIBIT G: PRICE & UTILITY COST DATA

Please refer to the following pages for Exhibit G.



Exhibit G - Price & Utility Cost Data

STM application	10	11	12		
Region					
name					
type					
a) Total Purchase Price (as at June 30th, 2011), excluding Closing Adj's					
Total Original Cost					
Accumulated Depreciation					
Contributions -in-Aid of Construction					
Specific surcharges approved by TCEQ					
Revenues from explicit Customer Agreements					
Developer Contributions					
Other (please explain)					
Total CIAC					
Net Book Value <u>before</u> CIAC (June 30th, 2011)					
Original Cost <u>after</u> CIAC (June 2011)					
Accumulated Depreciation <u>after</u> CIAC (June 30th, 2011)					
Net Book Value <u>after</u> CIAC (June 30th, 2011)					
b) Utility Plant in Service (as of June 30th, 2011)					
c) Plant Acquisition Adjustment (June 30th, 2011)					
Total Purchase Price (June 30th, 2011)					
d) Extraordiante Loss on Purchase					
e) Accumulated Depreciation on Plant					
f) Cash					
g) Notes Payable					
h) Mortgage Payable, to be reduced for payments made prior to closing					
i) Other - Construction WIP (as of June 30, 2012)					
i) Other - Prepaid expenses (as of June 30, 2011)					

88%

101%

69%

84%

79%

Note Purchase Price negotiated was for Utility Plant in service as at June 30 2011, with a Closing Price Adjustment. The Closing Price adjustment takes into consideration asset additions, depreciation and retirement between June 30th, 2011 and the closing date

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## EXHIBIT H: OTHER TRANSACTION CONSIDERATIONS

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Please see the following page for Exhibit H.

## OTHER TRANSACTION CONSIDERATIONS

The following details "Other Transaction Considerations" with regards to Corix Utilities (Texas) Inc. acquisition of utilities in the Hill Country and S.E. Region of Central Texas, and includes the following:

### ***Project Initiatives in the Region:***

Corix is experienced in providing long-term sustainable utility service to the systems under its operation and control. Additionally, Corix is a multi-utility organization that provides utilities operations, utility services and utility products. Our utilities services in Texas currently involve water meter reading services to Austin Energy. We have recently established a Water Products sales force in Texas. Our Water Products Group provides pipe, valve, control products and solutions as well as manufactures packaged water treatment plants, wastewater treatment plants and specialty valve and master meters. Currently the Corix Group has approximately 75 utility/services/ products staff located in Austin. Having the multi-utility capacity allows Corix to support our utility operations with technical expertise in utility O&M, measurement & metering and product/ systems that other public or private utilities do not have in-house.

Presently, Corix is undertaking work on several projects in Central Texas in advance of the regulatory approval of the acquisition of these assets from LCRA.

*Spicewood Beach: Due to the urgency of the water supply system for this community, Corix is working with Burnet County to obtain a Department of Agriculture CDBG grant. Funds would be used towards the construction of an alternate water system for the Spicewood Beach community including the communities of Lakeside Beach and Eagle Bluff. Corix has been working closely with the County with respect to both groundwater and surface treatment options to provide a long term sustainable solution to their water supply problem. The existing water well will be retained for emergency back-up purposes.*

### **Customer Care and Utility Billing Services**

1. Corix will be converting the customer base to our Northstar CIS system which will provide customers with a fully comprehensive bill including historical consumption data
2. Customers will be provided a detailed bill insert in the first two months to communicate changes in the cosmetic look and feel of their bill and to address any new contact information
3. Customers will be provided with online access via the Corix website to set up new service or provide a change of address and access a copy of their bill at anytime with payment options remaining the same and unchanged
4. Customer service orders and records will be kept on file for a minimum of seven years in the Austin, Texas office and although the servers are out of state and fully supported by a secure data center the information will be accessible to the TCEQ and the customers at anytime. This issue has been previously discussed with the commission and we had received approval at that time
5. The customers will be supported by a call center with attendants available between the hours of 8 – 5pm for billing inquires and after hour for emergencies
6. Customer deposits will be purchased from LCRA and held on account. Amounts will be reviewed and adjusted as per the TCEQ rules and refunds will be provided to customers as required.

### **Texas Water Code 13.301(j)**





LCRA's disclosure regarding contributed property pursuant to TWC 13.301(j) can be found in Section 7.2(O) of the Purchase Sale Agreement dated March 30th<sup>st</sup>, 2012, as amended in the Confirmation and Supplemental Agreement dated Oct 1<sup>st</sup>, 2012.

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**EXHIBIT I: TARIFF TERMS & CONDITIONS FOR WATER (W)**

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Please refer to the following pages for Exhibit I (Water), including

- Section 1.0: Rate Schedule
- Section 2.0: Service Rules and Policies
- Section 3.0: Extension Policy
- Section 4.0: Drought Contingency Plan
- Appendix A: Sample Service Agreement (with Appendix B – Blank Form)