

Control Number: 42971



Item Number: 1

Addendum StartPage: 0

House Bill (HB) 1600 and Senate Bill (SB) 567 83rd Legislature, Regular Session, transferred the functions relating to the economic regulation of water and sewer utilities from the TCEQ to the PUC effective September 1, 2014.



N297

Suite 209, 6836 Bee Caves Road Austin, TX 78746 Phone: 512-306-4000 Fax: 512-306-4009

Texas Commission on Environmental Quality Water Supply Division, Utilities and District Section, MC-153 P.O. Box 13087 Austin, TX 78711-3087

2014 Sepril 29, 2013 APT 10: 19 PUBLIC UTILITY COMMISSION FILING CLERK

Application for the Sale/ Transfer /Merger of multiple utility systems from the Lower Colorado River Authority to Corix Utilities (Texas) Inc.

We are pleased to provide the TCEQ with our multiple STM applications for the transfer of the utility assets and operations from the Lower Colorado River Authority to Corix Utilities (Texas) Inc. We have provided ten individual binders for each STM application and request a docket be created for each separate application. In the case of where there is both water and wastewater utilities serving the same community, both utility systems are included in the same application. Pursuant to previous discussions with TCEQ staff, several of the STM applications request minor adjustments to the Certificate of Convenience and Necessity (CCN) boundaries to reflect the actual coverage of the utility system. Pursuant to previous discussions, we have provided four copies of the Purchase Sale Agreement between Corix and LCRA as this document covers the sale and purchase of all the utility systems noted herein.

Attached to this letter please find an Overview of the TCEQ filing, indicating the specific system(s) where we are requesting approval of the transfer and the issuance of a new CCN number or a new CCN for existing services. Also enclosed are applications for new Certificate of Convenience and Necessity for one of the utility systems. These systems were previously operated by LCRA without a CCN.

Our STM applications cover 14 of 18 utility systems being acquired by Corix. One system being acquired relates to the provision of raw water for irrigation purposes and is not subject to TCEQ jurisdiction. We are currently finalizing certain consents and agreements relating to the Windmill Ranch Wastewater System, the Lometa Water System and the Lometa Wastewater System, and will file our STM applications related to these utilities at a later date when these agreements are finalized.

We look forward to working with the Commission and other stakeholders with respect to this STM application. Should you have any questions, please contact me directly.

Yours truly, Corix Utilities (Texas) Inc.

Mr. Ed Yanoshita General Manager



Cc. John Shaw, Vice President, Corporate Development

OVERVIEW	OF CORIX	TCEQ	FILING

1		STM		E X X X X X X X X X X X X X X X X X X X	
Utility	New CCN Number*	w/map amendment (boundary tweak for existing service area)	New CCN for Existing Service	Tadiff	WW Discharge Permit Transfer
Alleyton W	√		· · · · ·	· · · · ·	
Alleyton WW	1		. 1	. .	1
Matagorda Dunes W	1	1		· · · • • •	
Matagorda Dunes WW	1	л. 	1. C		1
Camp Swift WW	*				1
McKinney Roughs WW	√ *				1
Ridge Harbor W	1	1		×	
Ridge Harbor WW	1			, C	1
Spicewood Beach W	1	1		· · · · · ·	
Quail Creek W	1			x	
Smithwick Mills W	1	¥		1	
Sandy Harbor W	· 🖌	1.		, (-	
Buchanan Lake W	1	1		1	
Paradise Point W	1	1		£	

* New CCN number, except for last W & WW utilities to potentially close next year, who then assume LCRA's old W & WW CCN numbers.

ALLEYTON WATER AND WASTEWATER SYSTEMS

APPLICATION FOR SALE, TRANSFER OR MERGER OF A RETAIL PUBLIC UTILITY

FOR

THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Submitted to:	TEXAS COMM	IISSION ON ENVIRONMENTAL QUALITY
	WATER SUPP	PLY DIVISION
	UTILITIES AND	DISTRICTS SECTION, MC-153
	P.O. Box 130	087
	AUSTIN, TX 7	78711-3087
	RECEPTION P	PHONE: (512) 239-1000
By:	CORIX UTILIT	IES (TEXAS) INC.
	SUITE 209, 68	836 BEE CAVES ROAD
	AUSTIN, TX 7	78746
	PHONE:	(512) 306-4000
	FAX:	(512) 306-4009
	CONTACT:	EDWARD YANOSHITA
		GENERAL MANAGER, CORIX UTILITIES (TEXAS) INC.
	PHONE:	(512) 659-2942
	EMAIL:	ED.YANOSHITA@CORIX.COM

DATE:

DECEMBER 2012







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TCEQ APPLICATION: ALLEYTON

Corix is pleased to submit the following STM Application for the Alleyton systems.



	*RN#	at and be an interesting to the standard of		*CN#			* 1	f know	n (See in	structig	ogs)
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Lease/Ren	ntal	antifacture brockness			NO				<u>biblion de la dicita que serve que</u>		5 3
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	Name: Monica Masters		Title:		Sr. Manage	Catego r	ory
	Address:	P.O. Box 220	Telephone	: (AC)	(512) 57	8-3541	
	Fax:	(512-473-4094	Email:		monica.i Icra.org	nasters	@
4.	About <u>the las</u>	t rate increase for the system or facilities being	g transferred:	See Curre	Exhibit ent Rates	Α	
	A. What was	the effective date of the last rate increase?	October 1, 2011			,	
	 B. Was notic predeces 	e of this increase provided to the Texas Comisors?	mission on Environr	nental (Quality or it		

X No Yes Application/Docket Number: Date:

5. Please provide a list of all customers affected by this transaction who have deposits held by the transferor or seller utility, if any, and include the following information (attach additional sheets if necessary):

Name and Address of Utility Customer	Date of Deposit	Amount of Deposit	Amount Unpaid Interest Deposit	of on
See Exhibit B – Customer Deposits		. %	1	

Within 30 days of the actual transaction date, and prior to the transfer of the certificate by the TCEQ, the seller must provide proof to the Commission that these customer deposits were returned to the customers or transferred to the purchasing utility. Proof should include a sworn affidavit. (See PSA Amendment #1)

QUESTIONS 6 THROUGH 16 REFER TO THE TRANSFEREE OR PURCHASER

- 6. For the person or entity acquiring the facilities and/or CCN:
 - Applicant: Corix Utilities (Texas) Inc.

(Individual, Corporation, or Other Legal Entity)

(If a	Utility Name: <u>Same as above</u> different than above) Utility Address: 6836 Bee Cave Road, Suite 209, Austin , TX 78746
	Fax: (512) 306-4009 Email: ed.yanoshita@corix.com Telephone (AC): (512) 306-4003
	CCN Numbers held prior to the filing of this application: N/A
7.	Check the appropriate box and provide information regarding the legal status of the transferee applicant: Individual
	Home or Property Owners Association
	X Corporation; provide charter number as recorded with the Office of the Secretary of State for Texas: #0801600117
	Non-profit, member-owned, member-controlled Cooperative Corporation (Article 1434(a) Water Supply or Sewer Service Corporation); provide charter number: Municipally-owned utility



District (MUD, SUD, WCID, etc.)

County Other (please explain):

8.

If the applicant is an *Individual* or sole proprietorship, provide the following information. If not, skip to the next question.

Name:	n/a	Telephone (AC):
Fax:	р 	Email:
Address:		

9. If the applicant is other than an *Individual* provide the following information regarding the officers or partners of the legal entity applying for the transfer. You must complete either question 8 or question 9, whichever applies to the transferee applicant.

•Name:	Brett Hodson Telepho	ne (AC):	(604) 697-6711
Address:	1160, 1188 West Georgia Street, Vancouver, BC V6E 4A2, Canada	<u></u>	(00.17001.0111
Position:	PresidentOwnership % (if applied	able):	n/a
•Name:	Hamish Cumming Telepho	ne (AC):	(604) 697-6714
Address:	1160, 1188 West Georgia Street, Vancouver , BC V6E 4A2, Canada		- Antonio anton
Position:	Executive Vice President , Legal, RiskOwnership % (if applic Management & Corporate Secretary	able):	n/a
•Name: Address:	Albert Low Telephon 1160, 1188 West Georgia Street, Vancouver, BC V6E 4A2, Canada	ne (AC):	(604) 697-6704
Position:	Executive Vice President, Support Services & Ownership % (if applic Chief Financial Officer	able):	n/a
•Name:	Dietz Kellmann Telenhor		(604) 607 6742
Address:	1160, 1188 West Georgia Street, Vancouver, BC V6E 4A2, Canada	10 (/ 10).	(004) 001-0142
Position:	Executive Vice President, CorporateOwnership % (if applic Development	able):	n/a
	na seren en la la compañía de la compañía de la compañía de seren de la collectura en estado de la compañía de		
•Name:	Telephor	ie (AC):	
Position:	Ownership % (if applic	able):	

See Exhibit C - Certification of Account Status

10. Contact person. Please provide information about the person to be contacted regarding this application. Indicate if this person is the owner, operator, engineer, attorney or accountant. Name: Derek Seal Title: Attorney

Websele use and a		, <i>4</i>		,	
Address:	401 Congress Ave.,	Suite 2100, Austin, Texas 78701	Teleph	one (AC) [.]	512-370-2807
Fax #	512-370-2850		Fmail	dseal@w	instead com
Relations	hip to the applicant:	Outside Counsel		docailer	

- 11. Please respond to each of the following questions. Attach additional sheets if necessary.
 - A. Describe the experience and qualifications of the applicant to provide adequate utility service to the requested area:



See Exhibit D – Experience & Qualifications

B. Has the applicant acquiring the CCN or facilities or an affiliated interest of the applicant been under enforcement action by the TCEQ, Texas Department of Health (TDH), the Office of the Attorney General (OAG) or the Environmental Protection Agency (EPA) in the past for noncompliance with rules, orders or State Statutes?

Yes X No

If yes, please attach copies of any correspondence with these regulatory agencies concerning these enforcement actions and describe any actions and efforts to comply with those requirements. Attach additional sheets if needed.

C. Describe the source and availability of funds required to make the planned or required improvements, if any, to meet minimum requirements of the TCEQ and ensure continuous and adequate service.

The source and availability of funds required to make the planned or required improvements as identified in Exhibit K (Q.17.c), if any, will be from a combination of intercompany debt, equity funding from Corix Infrastructure (US) Inc., and internal cash flow from operations.

See Exhibit E – Corix Organizational Charts



D. Describe the anticipated impact of this transaction on the quality of utility service and explain any anticipated changes in the quality of service.

Corix anticipates the quality of utility service will be the same or better subsequent to this transaction. Corix has an extensive proven track record of providing water and wastewater utility services to similar sizes and types of systems as the system subject to this transaction.

Corix Operating Plan and Quality Management Plan for the system is attached as per Exhibit F - Utility Service Quality

E. How will the transaction serve the public interest?

Based on 30 Texas Administrative Code Section 291.112(c)(5) of TCEQ's rules, which describes the factors that TCEQ must consider in determining whether the transaction is in the public interest, Corix will provide proper notice, and as described in more detail in other provisions of the application, Corix is capable of rendering adequate and continuous service to every consumer within the certificated area, has extensive experience as a utility service provider, has a history of complying with regulatory requirements that apply to regulated public utilities and of properly managing or using revenues as a utility service provider, and has the ability to provide the necessary capital investment to ensure the provision of continuous and adequate service to the customers of the public utilities.

12 Please describe the nature of the proposed transaction:



In November 2010, the Lower Colorado River Authority (LCRA) announced its intention to divest itself of the retail and wholesale water and wastewater utility systems that it owned. In August of 2012, after undertaking a national solicitation process, LCRA announced that Corix was the preferred proponent to acquire substantially all of the utility systems that LCRA was seeking to divest. In November, 2011, Corix and LCRA entered into a Memorandum of Understanding to acquired 18 utility systems in the Hill Country and in the S.E. Region of Central Texas. On March 31st, 2012 Corix and LCRA executed a Purchase Sale Agreement which provided a base purchase price, an allocation of the purchase price between systems and a closing price adjustment mechanism (to account for changes in asset values between June 30th, 2011 and the closing date to acquire these 18 utility systems). On October 1st, 2012, Corix and LCRA also executed a Confirmation and Supplemental Agreement related to the utility systems, but excluding Lometa water and wastewater system.

The 18 systems subject to this purchase sale transaction are listed below:

- 1. Alleyton Water Utility System
- 2. Alleyton Wastewater Utility System
- 3. Matagorda Dunes Water Utility System
- 4. Matagorda Dunes Wastewater Utility System
- 5. Camp Swift Wastewater Utility System
- 6. McKinney Roughs Wastewater Utility System
- 7. Ridge Harbor Water Utility System
- 8. Ridge Harbor Wastewater Utility System
- 9. Spicewood Beach Water Utility System
- 10. Quail Creek Water Utility System
- 11. Smithwick Mills Water Utility System
- 12. Sandy Harbor Water Utility System
- 13. Lake Buchanan Water Utility System
- 14. Paradise Point Water Utility System
- 15. Lometa Water Utility System (subject to ROFR by City of Lometa, expired)
- 16. Lometa Wastewater Utility System (subject to ROFR by City of Lometa, expired)
- 17. Windmill Ranch Wastewater Utility System (Pending)
- 18. Windmill Ranch Raw Water Transportation System (not subject to TCEQ jurisdiction) (Pending)

In addition, under the terms of the Purchase Sale Agreement, Corix and LCRA will work collaboratively with the respective stakeholders to develop a plan of action to replace the non-compliant water supply at Bonanza Beach and Tow Village (the "Environmentally Excluded Assets") with a new water supply, such that LCRA can become fully divested of these two remaining utility systems within 2 years of the financial close of the divestiture of other systems to Corix. Notwithstanding, Corix is under no obligation to acquire the <u>original</u> water distribution system assets.

The Right of First Refusal held by the City of Lometa expired on July 3rd unexercised.

Corix, pursuant to an Transitional Operations & Maintenance Agreement with LCRA has commenced operations of the 18 systems on July 1st, 2012. This operational contract will terminate on the financial closing and transfer of <u>each</u> individual system from LCRA to Corix. The proposed transaction represents a unique utility privatization transaction in the State of Texas, where a public agency is divesting itself of 17 retail utility systems and a raw water supply system to an investor owned utility.



13 If the transferee applicant is an Investor Owned Utility (IOU) and will be under the rate jurisdiction of the TCEQ, please provide the following information.

See Exhibit G - Price & Utility Cost Data

A.		 Total Purchase Price: Total Original Cost (as recorded on boost and the preciation as of the preciation as of the preciation as of the preciation as of the preciation of the precision of the prec	books of seller or merging entity): broposed effective date of the transatived by TCEQ: stomer agreements: (please explain): se explain):	.ction:
		Total Contributions in Aid of (Construction	
		Net Book Value:		
		If the Original Cost or any of the abov by the PUC, the TWC or the TCEQ, pla	e items has been established in a r ease provide the Application/Docket	ate case proceeding Number and date:
		Application/Docket Number: n/a		Date: n/a
See E C.	given	 Complete the following proposed ent surviving) company. Additional entries intended to pose descriptive limitations 	ries listed below as shown in bool may be made; the following are sug	s of purchasing (or gested only, and not
		Utility Plant in Service: Plant Acquisition Adjustment: Extraordinary Loss on Purchase: Accumulated Depreciation of Plant: Cash: Notes Payable: Mortgage Payable: Others (please list):	See Exhibit G: Price & Utilit	y Cost Data
		As the purchaser, I understand that it provide written evidence and support used and useful for providing utility serv	is my responsibility in any future for the original cost and installation vice.	e rate proceeding to date of all facilities

- 14. Please indicate the proposed effect of this transaction on the rates to be charged to the affected customers:
 - X All the customers will be charged the same rates as they were charged before the transaction.



Some

All customers will be charged different rates than they were charged before the transaction.

If rates are changing, please explain:

Corix proposes to adopt the existing rates currently charged by LCRA and maintain those rates following our acquisition of the utilities until Corix has better information about the required costs of services. Corix current plans are to undertake detailed cost of service studies, and based on the results of the cost of service studies, Corix will be better able to determine any required rate adjustments. Please refer also to Section 5.3 of the Corix-LCRA Purchase Sale Agreement regarding possible rate impact mitigation measures that have been agreed to between the Parties.

X Applicant is an IOU and intends to file with the Commission or municipal regulatory authority an application to change rates of some/all of its customers as a result of this transaction. If so, please explain: Following the close of this transaction. Corix current plans are to undertake detailed cos

Following the close of this transaction, Corix current plans are to undertake detailed cost of service studies, and based on the results of the cost of services studies, Corix will be better able to determine any required rate adjustments. Depending on any required rate adjustments, and subject to Section 11.3 of the Corix-LCRA Purchase Sale Agreement, Corix will file its application to change rates with the Commission at that time.

X Other. Please explain:

Corix proposes to adopt the existing rates charged by LCRA and maintain those rates following our acquisition of the utilities. Notwithstanding the foregoing, some of the fees charged in the former LCRA Tariff are not allowed to be charged by a Investor Owned Utility, and have been removed by Corix in its proposed Tariff Terms and Conditions. Please refer: Exhibit I - Tariff Terms & Conditions (including Drought Contingency Plan)

15. List all neighboring water and /or sewer utilities, cities, and political subdivisions providing the same service within two (2) miles of area affected by this proposed transaction. This information should be available from the water utility database (WUD) or Applicant's licensed water operator.

Alleyton Water and Wastewater:

- Lower Colorado River Authority
- Barton WSC
- City of Columbus
- Glidden FWSD #1
- Columbus Oaks Apartments

16. Financial, Managerial and Technical information for the acquiring entity.

See Exhibit J – Corix Infrastructure (US) Inc. Historical Financial Statements



The financial information presented is for Corix Infrastructure (US) Inc., which is the parent company of Corix Utilities (Texas) Inc. (the acquiring entity). As Corix Utilities (Texas) Inc. was incorporated to undertake the acquisition of the LCRA water and wastewater systems, it has no historical financial information. Pursuant to discussions with TCEQ staff, projected financial statements for Corix Utilities (Texas) Inc. are not required.

PLEASE ANSWER QUESTIONS 17 THROUGH 22 ON A DIFFERENT SHEET 17. - 22. FOR EACH PHYSICALLY DISTINCT SYSTEM BEING TRANSFERRED OR ACQUIRED

the name, class, and licer	nse number of the operat	or(s) that will be responsible for	or the system:
Name	Class / License#		
Hill Country:	Water - Surface	Water- Groundwater	Wastewater
Gregg Goldsmith	A, WO0019383	A, WO0019383	B. WW0014975
GayIn Griffin	C, WS0010294	n/a	C. WW0044585
Rockey Layton	B, WS0000537	C, WG0011888	C WW0037426
Tim Simon	A, WO0018590	A, WO0018590	B. WW0039702
Tommy Collier	A, WO0012271	A. WO0012271	n/a
Hillman Hockett	B, WS0002599	C, WG0002675	B. WW0026967
Matt Molter	B, WS0008134	B, WG0009332	B. WW0033713
David Miller	D, WO0031067	n/a	D. WW0046560
Greg Preseley	C, WS0009023	B. WG0003228	B WW0005270
Michael Stone	n/a	C. WG00012159	
South East Region:	Water - Surface	Water- Groundwater	Wastewater
Don Nolen	n/a	C. WG0010233	B WW0027951
Dennis Ramsey	n/a	C. WG0001854	C. WW0001468
Glenn Smith	n/a	D. WO0010233	B WW0029926
James Elam	n/a	D. WO0016971	C WW0010207
Jason Murry	n/a	C, WG0004252	II WW0034303

See Exhibit K – System Specific Technical Data

23. Li

- 24. Attach the following maps with each copy of the application: See Exhibit L – System Specific Maps
 - a. One small scale map clearly showing affected service area with enough detail to accurately locate the area if the application is for the transfer of all or a portion of a CCN.
 - b. One large scale map showing the proposed service area boundaries being sold, transferred, or merged and, if available, the existing and proposed facilities. Color coding should be used to differentiate existing from proposed facilities. Facilities and service area boundaries should be shown with such exactness that they can be located on the ground,

If transferring area not currently in a CCN or a portion of an existing CCN area please attach the following hard copy maps with each copy of the application:

- 1. A general location map delineating the proposed service area with enough detail to accurately locate the proposed area within the county.
- 2. A map showing only the proposed area by:
 - metes and bounds survey certified by a licensed state or registered professional land i. surveyor: or
 - projectable digital data with metadata (proposed areas should be in a single record ii. and clearly labeled, data disk should be included); or
 - following verifiable natural and man-made landmarks, or iii.
 - a copy of recorded plat map with metes and bounds. iv
- 3. A written description of the proposed service area.

CORIX°

EXHIBIT A: CURRENT RATES

ALLEYTON WATER

Effective October 1, 2011

ALLEYTON WASTEWATER

Effective October 1, 2011

*Please refer to Exhibit I, Section1 (Tariffs) for additional rate information.





EXHIBIT B: CUSTOMER DEPOSITS

Please refer to the following page for Exhibit B.



COPIX.

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ALLEYTON WATER AND WASTEWATER SYSTEMS STM APPLICATION ACQUISITION OF WATER & WASTEWATER UTILITIES FROM LCRA

DEPOSITS (WATER AND WASTEWATER) FOR ALLEYTON SYSTEMS

						Danceite	
Account #	Name	Service Address	Town/City	Account Status	Division Code	Balance	Deposit Date
00440621	KATHY WILSON	410 A CAMP (BEER JOINT) ST	ALLEYTON	Active	Alleyton	(\$100.00)	. 1/25/12
00440651	LAURA LOZANO	1275 OLD ALLEYTON RD	ALLEYTON	Active	Alleyton	(\$100.00)	2/2/07
00440676	JUAN GARCIA	706 TRAVIS RD	ALLEYTON	Active	Alleyton	(\$100.00)	6/28/12
00440706	TINA BIDALES	112 DANIELS MEADOW LN	ALLEYTON	Active	Alleyton	(\$100.00)	8/3/11
00440716	SHERYL TELLO	206 CANAL ST	ALLEYTON	Active	Alleyton	(\$100.00)	12/10/08
00440861	ADRIAN FLORES	409 CAMP ST	ALLEYTON	Active	Alleyton	(\$100.00)	10/9/12
00440941	CATHERINE ROY	303 CANAL ST	ALLEYTON	Active	Alleyton	(\$100.00)	1/6/10
00440991	YONLANDA BOLDEN	507 LIVEOAK ST	ALLEYTON	Active	Alleyton	(\$100.00)	4/5/10
00441056	JEWEL MITCHELL	602 TAYLOR ST	ALLEYTON	Incoming	Alleyton	(\$100.00)	10/31/12
00441196	BETH VASQUEZ	100 HARBERT ST	ALLEYTON	Active	Alleyton	(\$100.00)	4/9/12
00441226	VALLERY COLUNGA	505 ROSENFIELD	ALLEYTON	Active	Alleyton	(\$100.00)	11/21/11
00441296	LILLIE CONTRERAS	1005 OLD ALLEYTON RD	ALLEYTON	Active	Alleyton	(\$100.00)	12/2/10
00441371	JOHANNA VASQUEZ	503 ROSENFIELD	ALLEYTON	Active	Alleyton	(\$100.00)	10/10/11
00441391	ARTEMIO VEGA	400 CENTER ST	ALLEYTON	Incoming	Alleyton	(\$100.00)	10/26/12
00441416	ISMAIL MOHAMMAD	3933 E HWY 390	COLUMBUS	Active	Alleyton	(\$100.00)	10/22/09
00443406	JON WOODS	509 CANALAVE	ALLEYTON	Active	Alleyton	(\$100.00)	1/17/08
00501742	MICHAEL WAYNE WILLIAMS	465 TRAVIS	ALLEYTON	Active	Alleyton	(\$100.00)	5/5/08
00507884	RUBY FITZGERALD	842 TAYLOR ST	ALLEYTON	Active	Allevton	(\$100.00)	6/23/06
00509554	MURRANDY SUTTON	306 TAYLOR ST	ALLEYTON	Active	Allevton	(\$100.00)	6/3/10
00510444	QUIRINO MARTINEZ	508 1/2 CAMP ST	ALLEYTON	Active	Alleyton	(\$100.00)	9/11/12
00510964	AGUSTIN LARA	311 HARBERT ST	ALLEYTON	Active	Alleyton	(\$100.00)	5/17/10
00513659	DORIS FITZGERALD	805 TAYLOR	ALLEYTON	Active	Alleyton	(\$100.00)	9/2/10
						(\$2,200.00)	





EXHIBIT D: EXPERIENCE & QUALIFICATIONS

Please refer to the following page for Exhibit D.





CORIX EXPERIENCE AND QUALIFICATIONS

Corix Utilities (Texas) Inc.

Corix Utilities (Texas) Inc. (the "applicant") is a newly formed, wholly-owned subsidiary of Corix Infrastructure (US) Inc. The Company was established to acquire the assets and operations of 18 small utility systems from LCRA and to undertake additional utility operations and activities in the State of Texas. On July 1, 2012, Corix Utilities (Texas) Inc. assumed day-to-day operations, maintenance and asset management responsibility for the 18 utility systems subject to this transaction under contract with LCRA. Corix Utilities (Texas) Inc. has hired many of the utility operating staff from LCRA and so there has not been loss of system knowledge arising from the transition of operations. Corix Utilities (Texas) Inc. has been providing high quality operation, maintenance and asset management services, as well as customer care and billing services, on an on-going basis. Corix Utilities (Texas) Inc. is part of the Corix Group which provides utility services to small and medium sized communities across North America. As such, Corix Utilities (Texas) Inc. has access to organizational support and technical expertise in order to provide a continuing level of quality services.

Corix Group

Corix is a recognized leader in the implementation of sustainable water, wastewater and energy infrastructure solutions for communities across North America. Corix designs, supplies, builds, installs, finances and manages utility infrastructure on behalf of municipal, institutional, military and private-sector customers.



Corix currently has over 2,500 employees, in three business groups, dedicated to providing high quality utilities, services and products across North America. Combined with its subsidiaries, Corix brings 70 years of experience, financial stability and cost effective, efficient approaches to operating and maintaining community utility infrastructure. The combination of operations and maintenance expertise, in-house management capabilities, financial resources, and vertical integration of products, systems and services all together guarantees sustainable solutions to almost any multi-utility project. The Corix team also offers a wide range of professional, qualified operators and technicians in all fields of sustainable energy, potable and non-potable water and wastewater. With its national operational governance, technical supervision and training, Corix assures high quality operational performance and safety in the systems it operates.

Corix has a history of stable revenue generation and operating cash flow. We have the benefits of strong management, focused governance, and financial conservatism that has served us well over the past decade. Corix has a diversified revenue base across various regions in the United States and Canada and across three core business divisions: utility operations, utility services, and utility products.

This integrated business model allows Corix to bring unique benefits to our utility operations by leveraging our inhouse utility services and products, and manufacturing and control solutions capacity. In the United States, Corix now operates in 30 States, *(refer map below),* with large operations in southern California, on the East Coast, and in the Midwest. Our Corix Water Products Group also maintains a network of branch offices in California. "Corix Utility" operations currently has over 500 staff in the United States serving over 350,000 people with water, wastewater and multi-utility systems. We operate utilities in 18 States, through seven regional offices and over 80 subsidiary companies. On March 30, 2012 Corix also announced its agreement to acquire 20 small water and wastewater utility systems in Central Texas from the Lower Colorado River Authority. These acquisitions significantly bolstered our water and wastewater holdings and overall institutional capacity.

Lines of Business

Corix has a unique "economies of scope" business model that integrates three distinct but highly complementary lines of business: Utilities, Utility Services and Utility Products as noted in the chart below:







Corix Utilities

Corix focus is placed on providing utility ownership and management across <u>multiple utilities</u> at the local level. Utilities under management by Corix include water treatment and distribution, wastewater collection and treatment, combined heat & power (CHP) plants & heat distribution systems, natural gas and electricity distribution, and chilled water plants and distribution systems.

Utility Services

Corix provides measurement and metering services to municipalities, utilities, and cooperatives throughout North America. The services provided include automated meter reading deployment, maintenance and support, meter changes and retrofits, contract meter reading, code compliance, utility field installation services and other special field services. Corix also provides water & wastewater contract operations and turnkey design-build water systems and fire hydrant leak detection, maintenance, and repair.

Utility Products

Corix operates 38 utility products branches across North America, distributing a full line of pipes, valves, meters, pumps, irrigation equipment, service, and repair products and other components that are used to transport clean water and wastewater. Corix also serves the oil, gas, and industrial products sector by providing measurement and flow control equipment.









Key Staff

The following offers a brief overview of Corix Utilities (Texas) Inc. personnel qualifications and experience (also refer to the staff organizational chart in *Exhibit E*):

Kevin G. Meagher - Vice President and Chief Operating Officer - Corix Utilities (US) Inc.

Kevin Meagher is Vice President and Chief Operating Officer for Corix Utilities (US) Inc. Drawing on over 30 years of utility experience, Kevin is responsible for the overall US operations of Corix Utilities, Oklahoma, Texas and Infrastructure (US) Inc. with more than 1,100 employees and currently over twenty utility and municipal projects that continue to expand. Under Kevin's leadership and guidance, Corix Utilities (US) has evolved to become one of the leading Infrastructure, Automated Meter Installation/Automated Meter Reading (AMI/AMR) project management and services contractors in the country. Kevin has played a major role in the development of Corix's systems and processes while continuing to build on the founding principles of employee safety, high quality value added services and customer satisfaction. He has also played a key role in the transition and integration of the Oklahoma University utility project.

Edward T. Yanoshita, P.Eng., JD, General Manager, Corix Utilities (Texas) Inc.

Edward Yanoshita is a professional engineer and also a lawyer. Prior to attending law school where he earned a business law degree, Ed had a 25 year career in business, engineering and technical sales of process equipment, specializing in water and wastewater treatment equipment. Ed is currently utilizing his range of skills and experience overseeing the transition of multi-utility operations to Corix in the southwest US.

• R. Darrin Barker, MBA, Utilities Operations Manager, Corix Utilities (Texas) Inc.

Darrin Barker is the Utility Operations Manager for Corix in Texas. He was hired by Corix in July of 2012. Prior to that, Darrin was the Operations Manager for LCRA's water and wastewater utilities. Following three years as City Manager for the City of San Saba, Darrin was employed by LCRA where he remained for 18 years. Darrin has also served as a rate design analyst and management analyst for the Public Utility Commission of Texas from 1989 to 1992. Darrin has a BSc. in Agriculture Economics and MBA (Texas A&M University).

Gloria L. Broussard, Senior Environmental Coordinator, Corix Utilities (Texas) Inc.

Gloria Broussard has been involved in the water and wastewater industry since 1974, holding Water Operator, Lab Analyst, Laboratory Supervisor, Wastewater Superintendent and Water Quality (pretreatment program) Administrator positions. With 11 years experience as a Senior Environmental Coordinator, and a Wastewater Operations License, Gloria is responsible for the regulatory compliance of water and wastewater facilities at Corix, including all regulatory reporting to state agencies such as the Texas Commission on Environmental Quality, Texas Water Development Board, and local groundwater conservation districts. Current duties at Corix also involve addressing public water quality enquiries and training water and wastewater operators on new regulations.

Gregg Goldsmith, Supervisor, Corix Utilities (Texas) Inc.

Gregg Goldsmith has both Surface Water License and B Wastewater license. Gregg began his water and wastewater career in1992 at LBJ MUD in Horseshoe Bay, working in all areas of field and plant operations. In 1999, Gregg accepted a job offer for employment with the LCRA to operate the Uplands water system in Bee Caves. In 2000 he was promoted to Area Supervisor for the Hill Country Region. He began his position with Corix in 2012 as a Hill Country Supervisor, overseeing numerous surface and ground water plants, water systems, wastewater plants and a composting facility.



• Jason Murry, Supervisor, Corix Utilities (Texas) Inc.

Jason Murry is currently Operations Supervisor for Corix Utilities (Texas) Inc. for the Southeast Region which includes water and wastewater utility systems in the Bastrop, Camp Swift, Alleyton and Matagorda areas. Jason has more than 10 years supervisory experience in the operation, repair and construction of water/wastewater distribution systems, leak repair and new service connections/extensions.









EXHIBIT E: CORIX ORGANIZATIONAL CHART

Please refer to the following pages for Exhibit E.





CORIX ORGANIZATIONAL STRUCTURE



Please refer to the following page for an overview of Corix Utilities (Texas) Inc. and staff structure.







Chart 1: Corix Utilities (Texas) Inc.





EXHIBIT F: UTILITY SERVICE QUALITY (CORIX OPERATING AND QUALITY MANAGEMENT PLANS)

Please refer to the following page for Exhibit F.



CORIX OPERATING PLAN AND QUALITY MANAGEMENT PLAN

FOR

LOWER COLORADO RIVER AUTHORITY

Submitted to:	LOWER COLORADO RIVER AUTHORITY	
	3/00 LAKE AUSTIN BOULEVARD	
	AUSTIN, TEXAS 78703	
	ATTENTION: MONICA MASTERS	
	TEL: 512.473.3541	
	EMAIL: MONICA.MASTERS@LCRA.ORG	
BY:	CORIX UTILITIES (TEXAS) INC.	
	6836 BEE CAVES ROAD, SUITE 209	
	AUSTIN, TEXAS 78746	
	CONTACT: ED YANOSHITA	
	GENERAL MANAGER	
	OFFICE: 512-306-4000	
	CELL: 512-659-2942	
	EMAIL: ED.YANOSHITA@CORIX.COM	
DATE:	DECEMBER 2012	



Building a World of Sustainable Communities





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OPERATIONS AND MAINTENANCE PLAN

1 WATER & WASTEWATER OPERATIONS & MAINTENANCE PLAN

Corix will maintain or increase system performance and ensure the provision of reliable, cost effective, and compliant services over the term of the contract. Our approach includes strategies that guarantee a significant increase in value of services provided.

1.1 STAFFING PLAN THAT OPTIMIZES CROSS TRAINING AND CERTIFICATION

Corix owns and operates both regulated and non-regulated utilities using a cost of service tariff approach. Corix has the skill sets to operate the water treatment and distribution, wastewater treatment and collection systems in Central Texas.

The multi-utility operations will have employees located permanently up and down the Colorado River Basin so that they are available to respond and support the O&M of the utility systems with many cross trained so as to have capacity to provide services on all of the systems. Corix may have supplemental on-site labor through contractors working under the direction of the Manager of Water Utilities Operations.









Operating and Quality Management Plans Corix Utilities (Texas) Inc.

Figure 1: Corix Utilities Staffing Organization Chart









Operating and Quality Management Plans Corix Utilities (Texas) Inc.



1.2 PROCESS OPTIMIZATION OVERVIEW

Corix's primary process control objective is to consistently meet or exceed current standards for quality imposed by Federal and State regulatory agencies. We will meet this objective by using the following established process control strategies:

- Process Control Strategy All process control strategies will be in written format. Monitoring, control parameters, and target values will be established for each process and each utility system will be electronically recorded.
- Process Data Management All data will be maintained electronically.
- Maintenance Management As part of the system inventory, Corix will develop a Master Equipment List (Asset List) and maintain it within the MIS. Problems and trends that cause failures can be tracked and responded to accordingly.
- Information Information will be collected, this data can be used to develop measurement tools such as Key Performance Indicators (KPI's) to determine the effectiveness of the process.

Corix will optimize utility processes by developing an operating plan for each utility which will include:

- Standard Operating Procedures (SOPs)
- Trend Charts for Process Control

To ensure efficient operation of the water and wastewater systems and compliance with regulatory requirements, Corix has established process optimization goals for the LCRA facilities. Table 1 presents these goals.

FUNCTION	IMPROVEMENT ACTION(S)
Compliance	Comply with all federal, state, and local water quality requirements: 100% compliance, 100% of the time.
Reliability and Redundancy	Ensure redundancy of critical processes and reliability of all electromechanical equipment by implementing comprehensive predictive and process maintenance programs.
Chemical	Develop Chemical Management Plan to track and optimize treatment chemical usage. Implement necessary safety improvements and complete a Process Safety Plan.
Energy	Reduce pumping and process energy demand by tracking usage and optimizing pump/motor efficiencies and hydraulic profile especially at water pump stations and lift stations. Use variable speed drive equipment where possible to reduce electrical usage.
	Develop measurement system to identify overloaded components and insulators breaking down and replacement plans to reduce system losses through these replacements.
O&M Cost	Reduce O&M cost through best management practices of labor and

Table 1: Process Optimization Actions



FUNCTION	IMPROVEMENT ACTION(S)	
1 1	resources.	
Staffing	Train and utilize qualified existing staff for available positions to the full benefit of the utilities.	1
ş v	Cross-train staff for multiple functions.	;
Conservation	Strive for less than 10% unaccounted for water (UAW). Strive for less than 15% wastewater inflow & Infiltration (I&I)	anna i

1.3 STANDARD OPERATING PROCEDURES

These SOPs will be based on operating the utility at an optimum performance level, and therefore cannot be fully developed in advance. To the extent that there are existing SOPs, these will serve as the starting point for Corix's review and establishment of appropriate SOPs. Typically, the O&M Manual is developed at three levels — the individual component level, the systems level, and the utility level. The component-level data, which is provided by manufacturers and equipment vendors, will be assembled and organized in a consistent, indexed format for easy reference. Upon reviewing this information on equipment and systems and developing a basic understanding of their operation — as well as studying the LCRA facility designs—our operations specialists will extract pertinent data developed by the various disciplines (e.g. operating limits, warnings, notes) and integrate them into an overall, system-wide and utility-wide O&M Manual.

The purpose of the O&M Manual is to consolidate data on the background, principles, and purpose of each process in the facilities and utility. The manual will provide the staff with a clear understanding of the utility facilities goals and process objectives, and will serve as a single reference for locating all the information and approaches necessary to successfully operate the utilities.

For the management team, the O&M Manual will provide a single document to record and list the process goals, objectives, and basic operating parameters for each facility process.

The facility's O&M Manual includes SOPs, which will be updated annually if necessary or whenever the process or equipment is modified or changed. We will retain the SOPs electronically within our secure data center to provide ready access for reference, field use, and updating.

SOPs are the backbone of any facility operation strategy. Operators create process SOPs to explain the operations of an entire process. Equipment SOPs detail the operation of a single piece of equipment, such as a pump. Whether the SOP is for a process or for a piece of equipment, the SOP is a basic guideline to be followed to ensure proper operation. SOPs are written in a form that reduces each step of the process or equipment operation to action words or phrases. A secondary use of SOPs includes training a new operator on the proper operation of the process or equipment. SOPs are not intended to replace well-organized and prepared training programs used for new operators.

SOPs include instructive guidelines for start-up, shutdown, and emergency operations. Each SOP includes safety notes, warnings, and cautions. For clarity and to facilitate comprehension, SOPs also include tables, diagrams, and drawings as appropriate. Corix will refine and expand current SOPs as needed for all aspects of the LCRA facilities.





SOPs provide operators with a quick reference to verify proper procedures. They will be placed in key areas to be easily accessible.

SOPs are useful in training new operators to operate specific pieces of equipment or perform testing procedures and in reminding operators of the specific procedures to follow before they start a task that they may not have performed recently.

Table 2: Dependability and Operation & Maintenance of WTS & WDS Utilities

WATER TREATMENT AND DISTRIBUTION SYSTEM (WTS & WDS) STANDARD OPERATING PROCEDURES

- 1. Water operators inspect critical equipment and facilities on a recurring basis.
- 2. Routine monitoring of water system pressures to immediately detect any pressure drops that would indicate a distribution system leak.
- 3. Operate all water treatment filters, chemical systems and related equipment according to the operating plan.
- 4. Routine monitoring of chlorine residuals in the system.
- 5. Routine flushing of hydrants ensures proper functioning of valves and adequate flows.
- 6. Periodic exercising of all valves in the water distribution system.
- 7. Continuous monitoring of pump operating conditions. Pumps that exhibit over-heating, seal failures or leakage or high vibrations are pulled off line and repaired or replaced.
- 8. Circulating pumps are regularly serviced and inspected.
- 9. Water meters are used to monitor water usage and loss in the utility systems.
- 10. Water systems maintained by Corix will strive to have built in redundancy.
- 11. Use of MIS to record routine maintenance and testing in accordance with the published maintenance program.
- 12. An inventory of water related repair parts is maintained allowing timely response to problem situations.
- 13. Maintain vendor accounts with parts suppliers both statewide and regionally.
- 14. All water distribution operators are licensed by the Texas Commission on Environmental Quality (TCEQ) and part of their continuing licensing is obtaining continuing education credits.
- 15. Corix may use subcontractors in Texas as augmentation of the workforce when needed.

Table 3: Dependability and Operation & Maintenance ofWWTS & WWCS Utilities

WASTEWATER TREATMENT AND COLLECTIONS SYSTEM (WWTS & WWCS) STANDARD OPERATING PROCEDURES

- 1. Wastewater operators inspect critical equipment and facilities on a recurring basis.
- 2. Routine monitoring of wastewater system pressures where force mains are used to immediately detect any backups that would indicate a collection system capacity issue or blockage within the sewer.





WASTEWATER TREATMENT AND COLLECTIONS SYSTEM (WWTS & WWCS) STANDARD OPERATING PROCEDURES

- 3. Operate the treatment plants, residual handling facilities and related equipment according to the operating plan
- 4. Periodic exercising of all valves in the wastewater collection system.
- Continuous monitoring of treatment and lift station pumps operating conditions. Treatment and lift station pumps that exhibit over-heating, seal failures or leakage or high vibration are pulled off line and repaired.
- 6. Use SCADA, hour meters and data loggers to monitor the efficiency of treatment and lift station pumps and related equipment.
- 7. Inflow and infiltration studies will be used to monitor water inflow into the wastewater treatment plants and collection system.
- 8. Use of MIS to record routine maintenance and testing in accordance with the published maintenance program.
- 9. An inventory of wastewater related repair parts is maintained allowing timely response to problem situations.
- 10. Maintain vendor accounts with parts suppliers both statewide and regionally.
- 11. All wastewater treatment and collection system operators are licensed by the TCEQ and part of their continuing licensing is obtaining continuing education credits.
- 12. Corix may use subcontractors in Texas as augmentation of the workforce when needed.

1.4 TREND CHARTS FOR PROCESS CONTROL

Trend charts will be prepared which will allow operators to follow the trends in these parameters and anticipate what is happening in the unit process. This allows operators to be proactive to operational problems rather than reactive when the process is in trouble. Corix staff will develop trend charts for all relevant operational parameters. Typical trend chart parameters include power consumption, raw water quality, treated water quality, plant loading, and chemical usage. Control limits will be established with identified links to the related SOP.

1.5 NEW METER INSTALLATIONS AND REPLACEMENTS

Corix will install new meters as requests for new service are processed and payment for service received.

The new meters will be installed in accordance with AWWA standards. However, meters will be continually added or removed from the system as needed. Corix will work with the LCRA to optimize the meter reading system as well as use that information to enhance conservation efforts.

1.6 COMPREHENSIVE MANAGEMENT INFORMATION SYSTEM (MIS)

Corix proposes to use a computer software system to maximize quality of the O&M of the LCRA utilities.





Our goals for implementation of the MIS work order program include:

- Install a full-featured MIS that is easy to use
- Maintain the integrity of the existing equipment data for future use
- Integrate with other plant functions such as operations, inventory, laboratory and administration
- Enable access to plant operations and MIS data

As part of this implementation, we will gather any additional information which will be necessary in order to achieve maximum system benefit. The MIS will have the capability, at a minimum, of:

- Maintaining repair records for each piece of Master Equipment List (MEL) equipment within the utility
- Scheduling and monitoring Preventive Maintenance (PM) activities
- Issuing work orders and purchase order requisitions
- Maintaining spare parts inventories
- Tracking repair warrantees
- Issuing exception reports, equipment status reports, and equipment repair priority reports

The MIS will provide concise, easy-to-read equipment reports that provide specific information based on manufacturer, type, location, or operating system and subsystem. This information can include life cycle costs, maintenance frequencies and histories, and status reports on all maintenance functions. Reports can focus on issues such as job completion, work order status, and manpower utilization.

The operation and maintenance staff will be responsible for obtaining the following kinds of data for entry in the MIS:

- All existing nameplate data and other pertinent information such as in-service date, and equipment specifications for each piece of equipment
- Equipment identification number, equipment description (name), and location.

The MIS will be maintained through the corporate Information Technology (IT) office. The database will be populated during the O&M phase of the project as part of the system-wide surveys and assessments and will continue until all major elements of the utilities are incorporated once the users are trained on the program. The database will be continuously updated.

1.7 WATER TREATMENT AND DISTRIBUTION SYSTEM OPERATIONS

Corix provides operations, maintenance, and management for all components of the water treatment and distribution systems including chlorine dosing systems, pumps, valves, existing and future meters, control systems, air release valves, fire hydrants, cathodic protection systems, and all piping. Corix has responsibility for the system, up to the point of demarcation. Corix will maintain volume and pressure in the system to meet required codes.

The first step to developing a strategy to operate the water facilities will be to evaluate the current status of operations. Benefits of our strategy are highlighted in Table 4. Maintenance needs will be catalogued and prioritized at all facilities according to the following requirements:



- A. Maintaining required water quality
- B. Maintaining service to LCRA customers
- C. Cost

Table 4: Operational & Maintenance Strategy for Water Treatment and Distribution System

OPERATIONAL CONDITIONS	Corix	BENEFITS
Operator Quality Assurance/Quality Control (QA/QC)	Perform distribution system testing. Perform lab functions at the treatment facilities. Focused QA/QC targets; targeted to process optimization and regulatory scrutiny.	Lower operating costs and complete adherence to regulatory requirements imposed by Federal and State agencies.
Preventive Maintenance (PM) Scheduling	Condition-based scheduling of PM tasks.	Lower life-cycle equipment costs; increased reliability of water system.
Predictive Maintenance (PDM)	Use predictive maintenance schedule to preclude unplanned failure of critical equipment	Establish baseline equipment condition and set up proper PM.
Inventory Management	Automated order point and expense analysis.	Lower inventory costs; increased reliability of critical systems.
Water Balance Calculation	Conduct annual water balance for the water distribution system.	Assess water loss and identify sources.
Remote Monitoring	Evaluate existing monitoring system Evaluate remote terminal unit at critical locations.	Optimize operations and detect problems proactively

Corix will staff the water treatment and distribution systems 5 days a week. Additionally these employees will be available for emergency call out 24/7. As part of our standard approach to water distribution system maintenance, we will:

- Respond to trouble calls 24/7 to investigate distributions.
- Track the locations of service calls and high-maintenance areas to prioritize repair and PM activities on the systems.

1.8 WASTEWATER TREATMENT AND COLLECTION OPERATIONS

Corix will be operating and maintaining the wastewater treatment and collection systems. The Manager, Utility Operations will guide the efforts of the staff. Corix will apply the operational strategies shown in Table 5. The wastewater operations plan will emphasize:

• Implementation of proven, documented systems for process control and optimization. Documentation of strategies and procedures.





- Electrical conservation to ensure cost effective operation in compliance with standards and regulations.
- Optimization of existing processes to ensure compliance in the short term.
- Working with engineers and construction contractors to commission new equipment and transition to new processes.

OPERATIONAL CONDITIONS	CORIX	BENEFITS
Operator Quality Assurance/Quality Control (QA/QC)	Perform lab functions at treatment plants. Focused QA/QC targets; targeted to process optimization and regulatory scrutiny.	Lower operating costs, and complete adherence to regulatory requirements imposed by Federal and State agencies.
Preventive Maintenance (PM) Scheduling	Condition-based scheduling of PM tasks.	Lower life-cycle equipment costs; increased reliability of wastewater collection systems
Predictive Maintenance (PDM)	Pump hour meter monitoring. Use PDM schedule to preclude unplanned failure of critical equipment.	Establish baseline equipment condition and set up proper PM.
Inventory Management	Automated order point and expense analysis.	Lower inventory costs; increased reliability of critical systems.
I/I Investigation	Identify trouble areas in the collection system in need of immediate attention as well as sources of likely infiltration.	Periodically assess collection system integrity, and mitigate stoppages as well as infiltration of the system.
Remote Monitoring	Evaluate existing monitoring system.	Optimize operations and detect problems proactively.

Table 5: Operational & Maintenance Strategies of Wastewater Collection

As part of our standard approach to wastewater treatment and collection system maintenance, we will:

- Respond to trouble calls 24/7 to investigate and clear blockages and plant alarms.
- Investigate all sewer main backups and take the necessary steps to alleviate the problem.
- Track the locations of service calls and high-maintenance areas to prioritize repair and PM activities on the systems.
- Temporary connections, if required, will be provided in a safe manner in the most timely and most cost effective manner as determined by the operator.

2 PREVENTIVE MAINTENANCE

Corix's maintenance program has the following objectives:



- Maintain the facilities and systems to the highest standard of care to protect against deterioration.
- Maintain equipment and appurtenances in a manner that maximizes operational life and endeavor to prevent unexpected repairs due to untimely failure.
- Provide timely and cost-effective response to both typical and emergency conditions.
- Ensure system performance through equipment reliability, uninterrupted service, and maximum uptime.
- Protect capital investments.
- Ensure the safety of personnel and equipment.
- Enforce equipment warranties.
- Control overall maintenance costs by reducing corrective and emergency/reactive maintenance costs.
- Corix will utilize the MIS to monitor the condition of the facilities and schedule routine inspections, maintenance, and repairs. The MIS will allow us to track performance, service history, and repair costs. The data generated will be used to evaluate the need to replace or rehabilitate any portion of the system.

The maintenance strategy for equipment will be based on three levels of maintenance:

- **Preventive Maintenance (PM)** is defined as routine and/or repetitive activities required or recommended by the equipment or facility manufacturer or Corix to maximize the service life and reliability of the system components. Proper PM is the all-important first line of defense against deterioration and failure.
- Corrective Maintenance (CM) encompasses activities required for operational continuity, safety, and performance. The status of CM work orders will be maintained in the MIS and work will be scheduled to the extent possible with groups of equipment to save time and reduce labor requirements. Upon completion of Corix's maintenance evaluation, critical spare parts will be stocked onsite or at a Corix operations warehouse to ensure that downtime is minimal. Each type of maintenance will be scheduled and its completion monitored using the MIS.
- **Predictive Maintenance (PDM)** virtually eliminates unexpected equipment failure because of normal wear. PDM activities will range from simple, periodic inspections to sophisticated condition measurements. The baseline condition for each critical piece of equipment will be identified and the equipment will be monitored against selected critical performance criteria.

The following outlines the basic components of Corix's maintenance approach. It provides an overview of our plan for maintenance as well as the implementation of the MIS.

2.1 PREVENTIVE MAINTENANCE PLAN (PM)

Corix's approach to minor (routine) maintenance focuses on PM. Proper PM decreases the total lifecycle cost of equipment or facilities. The lifecycle cost of equipment and facilities that have been properly maintained is a fraction of that which has been poorly maintained.

Corix will create a Master Equipment List (MEL). All equipment identified in the MEL will be assigned a unique asset number and location code and entered into the MIS. Once this is completed, the detailed nameplate data will be entered for each asset. We will then enter PM tasks and frequencies.



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Specific tasks, frequencies and PM procedures will be based on the manufacturer's O&M manual, and standards developed by Corix.

Each PM task will be assigned an identification number that will be unique to the task being performed. This unique PM task will describe the procedure needed, tools required, materials needed, and all safety requirements.

Each individual PM task will contain the date of the last revision, drawing reference numbers, O&M manual number, and location as well as any other documents that relate to the operation or maintenance of the equipment requiring maintenance.

2.2 CORRECTIVE MAINTENANCE PLAN (CM)

CM is defined as those non-repetitive activities necessary to correct a malfunction or replace a failing component of the facilities for operational continuity, safety, and performance. Planned CM is the result of proactive PM and PDM processes that identify the equipment's needs before a failure occurs. There are many reasons why planned CM is preferred to unplanned. For example, it provides:

- Increased process reliance due to decreased critical equipment failure.
- Reduced manpower costs due to improved job planning and scheduling.
- Reduced overall repair costs due to proactive repairs of minor issues before they cause more equipment damage.
- Reduced capital improvement costs due to increased equipment life spans.

2.3 PREDICTIVE MAINTENANCE PLAN (PDM)

Corix proposes to provide a level of PDM services that can considerably reduce unexpected equipment failure due to normal "wear and tear" or improper repair. The benefits of PDM include:

- Increased process reliability due to decreased equipment failure.
- Improved job planning and scheduling.
- Reduced overall repair costs.
- Reduced capital improvement costs.

Corix will establish a baseline condition for each critical piece of equipment identified, and periodically monitor the equipment for critical performance criteria. The information provided on the following pages defines these elements in detail.

As described, we will perform the initial evaluation to establish equipment condition and provide specific, detailed recommendations for any remedial repair needed. Monitoring will be performed, with additional performance criteria added, and at a frequency that will be dictated by the condition of equipment as monitoring occurs. In every case, this approach will improve the predictability of equipment performance and quality of service.

2.4 INITIAL EQUIPMENT CONDITION EVALUATION

The equipment condition evaluation will establish a baseline for PDM service. It will define what actions need to be taken immediately to avoid immediate and expensive failure, as well as





prescribe when monitoring levels must be adjusted to protect equipment. The results will be entered into the MIS for tracking and modeling.

To provide a continual baseline for all pieces of equipment at the plants, special inspections will be conducted similar to the initial evaluations performed. These follow-up inspections are recommended whenever a new piece of equipment is installed or when existing equipment is overhauled. This policy has the advantage of identifying equipment or facility repair problems early in the warranty periods. Alignment inspection may be provided for the initial evaluation as a method to pinpoint vibration or cause of premature bearing/seal failure.

All data, measurements, remarks, and conditions for each piece of equipment will be entered into the MIS as field data or text (as appropriate). Equipment needing repairs will automatically be assigned a work order with the appropriate priority level.

Run time meters can be installed and monitored in order to generate more precise data on equipment operation between monitoring periods. Data can be collected on run time and compared with readings on equipment; this information can also be useful in PM programs.

2.5 THE ASSET GUARDIAN (CMMS)

Corix has a wealth of experience with Asset Management and preventive maintenance solutions, including recent experience with projects such as the US Army, Fairbanks Sewer & Water and the University of Oklahoma. One of our strong "learnings" with starting to manage existing facilities is that to successfully achieve operational efficiencies requires close cooperation and a team approach with the existing operational professionals and the owner's design team combined with the expertise and knowledge of the Corix professionals.

This 'transition' project team then leverages all the available data and information as well as reviewing and auditing the processes. This is done to determine where opportunities may be achieved through changes to operational activities, upgrades to systems with capital investments or added technology.

On the Alaska project, Corix reviewed the operational efficiency of each utility and found that the lack of investment in things like basic SCADA technology resulted in poor operational efficiency. At the wastewater treatment plant, operators needed to manually undertake operations in the primary sludge treatment area, which would normally have been automated. Our business plan entails the systematic upgrade to system control and data acquisition functions to both improve overall efficiency, but also to improve employee safety and quality on job.

Corix utilizes a Microsoft-based software business solution tool for our Computerized Maintenance Management Software (CMMS) called Dynamics NAV. Our CMMS software, "The Asset Guardian" (TAG), an add-on module for Dynamics NAV, is ideal for managing assets that require scheduled maintenance, unscheduled repairs and inspection as part of a facilities life cycle. TAG can also be utilized for key personnel to manage technicians and customized on a day to day basis with required work orders. The following figures show typical screen captures of the TAG system.





neral Results				6
No	Jistribution System	Search Description	FLUSH WATER DI	
Description 2	and a second		TI CON-405	
Skandard Time	0.00	Released Work Orders	. <u>0</u>	
Estimated Step Time	0.00	Finished Work Orders .	<u> </u>	
Sub-Steps Total Standard Time	0.00	Assigned Templates , ,	, <u> </u>	
Sub-Steps Total Estimated Time .	0.00	Assigned Date Meters .	. 🖳 🦷	
Sub-Steps Exist		Creation Date	. 09/03/10	
Requirements Exist I		Lest Date Modified.	. 09/03/10	
Attachments Frid				

Figure 2: TAG Work Procedures Card incl. Validation Results Card

eneral Results			
lo. Prior Results to Print. 🚺 0	Acceptable Low Yalue	0.00	
asults Input Required . 🔽	Acceptable High Value	0.00	
alidation Required , , . I	Validation 1 Low	0.00	
Plank Light of Measures	Validation 1 High ,	0.00	
ate/Time Option None	Validation 1 Message		
	Validation 2 Low	0.00	
Symbol AllowedChoose Only One	Yalidation 2 High ,	0.00	
((as: than)	Yalidation 2 Message		tania tana ana
(Greater Than)	Specific Value Required		Refer
or> (Greater or Less) .	Positive Value		
	Negstive Value		
and a second			







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Figure 3:	TAG	Typical	Supervisor	Menu
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TAG - Supervisor
Equipment Card
Tools Card
🔠 Item Card
TAG Vendor
🖻 🤐 Maintenance Control
Work Procedures
Event Card
Work Schedule
🖯 🖾 Order Processing
🖼 Planned Maint. Order
Released Maint. Order
Maint. Order Pending Approval
🖂 🏠 Reports
Finished Work Orders
Inventory Below Minimum
Equipment Meter Reading Sheet
Orders Awaiting Charges
TAG Work Order
Workorder Status
🕢 🕀 🛄 Listing Reports
🔁 🛄 Entry Reports
🗄 🈂 History
Finished Maint, Order
1









The Asset Guardian
E 🖉 Equipment
Equipment
Reports
E Personnel
Personnel
🕀 🛄 Reports
E Dutside Service Providers
OSP OSP
Reports
E 2 Inventory
Consumables
Tools
GIB Copy Navision Item
H La Reports
Carto Matare
B Cat Inventory
Order Workcheet
Templates
Work Procedures
Reports
🖃 🎯 Work Orders
Requests
Planned
Released
Pending Approval
Finished
Tracking
Reports
🕑 🛄 Whiteboards
History
Periodic Activities
H Lonversion
C La Imports
CT Las Catura

















Figure 6: TAG Technician Whiteboard

Figure 7: TAG Released Work Order











Maintenance Work Order

PRIORITY: STATUS: ORDER TYPE: EQUIPMENT ID: LOCATION:	Routine IN PROCESS BI-ANNUAL TEST070246 / Well 1975 Vera Road Lir	Pump /	th BC 1/26	MAINT. TYPE TECHNICIAN CODE: STANDARD TIME:	PREVENT Tysev	0.00		UIDN: REC	200AGEVE0001 DUE 1 DUESTED SERVIN ESTIMAT	6 BY DATE: 09/0 CE DATE: 08/0 ED TIME: 0.00)3/10)7/10)
SERIAL NO: ENTERPRISE:		REG:	BC-COA	FAC: LE	i	AF	ea:	MAN	UFACTURER: Company ID: Line:		
STEP Finished					Technician Code	Starting Date	Standard Time	Estimate: Tim	d Actual Time	Test Results	Unit of Measure

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.





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.