J2.2.1.2 Inventory

Table 1 lists the major natural gas distribution components included in the privatization package. Drawings used to develop the inventory were the Vance Comprehensive Plan Tab G-5, Sheet 1 (1958) and Cathodic Protection Plan Tab G-8, Sheet 1 (1998). A list of the existing utility meters and isolation valves for the natural gas system was provided by the Installation and was also used in the development of the inventory components.

TABLE 1
Fixed Inventory
Natural Gas Distribution System - Vance AFB

Component	Size	Unit	Quantity	Construction Date
Pipe				
Black/C&W Steel	1.0	LF	11,300	1960
Black/C&W Steel	1.5	LF	4,510	1942
Black/C&W Steel	2.0	LF	7,500	1942
Black/C&W Steel	2.5	LF	4,500	1942
Black/C&W Steel	2.5	LF	8,160	1960
Black/C&W Steel	3.0	LF	740	1942
Black/C&W Steel	4.0	LF	8,980	1942
Black/C&W Steel	4.0	LF	140	1960
Black/C&W Steel	6.0	LF	5,430	1942
Black/C&W Steel	8.0	LF	770	1942
PE	1.25	LF	1,120	1994
PE	2.0	LF	3,160	1994
PE	3.0	LF	190	1994
PE	4.0	LF	2,290	1994
PE	6.0	LF	1,350	1994
PE	8.0	LF	190	1994
Regulators				
Pressure	1.5	EA	230	1960
Pressure	4.0	EA	100	1942
Valves				
Isolation Valve, BS	1.0	EA	1	1942
Isolation Valve, BS	1.25	EA	1	1942
Isolation Valve, BS	1.50	EA	4	1942
Isolation Valve, BS	1.75	EA	8	1942
Isolation Valve, BS	2.0	EA	26	1942
Isolation Valve, BS	4.0	EA	28	1942
Isolation Valve, BS	6.0	EA	16	1942
Isolation Valve, BS	8.0	EA	3	1942
Isolation Valve, PE	1.0	EA	1	1942
Isolation Valve, PE	1.50	EA	6	1942
Isolation Valve, PE	1.75	EA	2	1942
Isolation Valve, PE	2.0	EA	5	1942

MFH

Black/ C&W Steel	1.0	LF	11,500	1960
Isolation Valve, BS	2.0	EA	17	1960

Component	Size	Unit	Quantity	Construction Date
Isolation Valve, PE	4.0	EA	4	1942
Isolation Valve, PE	6.0	EA	8	1942
Isolation Valve, PE	8.0	EA	2	1942
Service Valve, Res, Stop	1.5	EA	~~460~~ 0	1960
Service Valve, Ind, Plug	2.5	EA	200	1942
Meters				
800 CF/Hr	#20	EA	51	1942
Cathodic Protection				
Anodes, Graphite	#9	EA	~~189~~ 169	1998
Rectifier, air cooled	28V/10A	EA	~~27~~ 19	1998
Anode Backfill		LB	18,900 11,340	1998
Conductor, Copper	#8/600V	LF	10,800 6,600	1998
Test Station		EA	3	1998

Notes:

C&W = coated and wrapped
BS = black steel
Ind. = industrial
EA = each
Hr. = hour
LB = pound
PE = polyethylene
Res. = residential
LF = linear feet
CF = cubic feet
V = volt

MFH

Anodes Graphite	#9	EA	20	1998
~~Rectifier Air Cooled~~		~~EA~~	~~8~~	~~1998~~
Anode Backfill		LB	7,560	1998
Conductor Copper		LF	4,200	1998

J2.2.2 Natural Gas Distribution System Non-Fixed Equipment and Specialized Tools

Tables 2 and **3** would typically list other ancillary equipment (spare parts) and specialized vehicles and tools included in the purchase. However, Vance is a very small installation with a small, contracted O&M operation. The Installation does not maintain significant levels of spares (they are actually prohibited from maintaining such levels), nor is there specialized equipment that could be made available for privatization. Hence, **Tables 2** and **3** reflect no items available for privatization.

TABLE 2
Spare Parts
Natural Gas Distribution System - Vance AFB

Quantity	Item	Make/Model	Description	Remarks
None				

Specifically excluded from the water distribution system privatization package:

- Non-potable water fire protection system, including deluge tanks.
- Irrigation systems.

J3.2.1.1 Description

The City of Enid, Oklahoma supplies potable water to Vance AFB for domestic, industrial, and irrigation use. The City of Enid's source is groundwater. It is treated and supplied to the Base through a dedicated booster pumping station and a 10-inch line from the pumping station to a City-owned master meter located west of Industrial Gate at 60 pounds per square inch gauge (psig).

The water flows from the City's meter via a 10-inch, AF-owned water line to a 300,000-gallon ground storage tank and a 500,000-gallon, 110-foot elevated storage tank. Near the ground storage tank is an automated booster pumping station that moves water to the elevated tank. Both the elevated and ground storage tanks include impressed current cathodic protection systems that include an interior array of suspended anodes. (The tanks are the only components of the potable water system that are cathodically protected.)

There are two water system areas on Vance AFB, constructed approximately 20 years apart – main Base and housing area. The main Base system was constructed in 1942 and is primarily comprised of ductile iron pipe; the family housing area system was constructed in 1960 using asbestos cement pipe. Water main sizes range from 10 inches to 24 inches in diameter. Average depth of burial is 36 inches.

Vance AFB has a small water system at Kegelman Auxiliary Airfield, a small training area about 30 miles northwest of Vance AFB, west of Oklahoma Highway 38. The water system consists of a Corps of Engineers' well approximately 150 feet east of Highway 38. From the well, a small water line crosses under Highway 38 and feeds the fire station. (This Vance-owned water line at Kegelman will be excluded from the privatization package.)

(Note that Vance AFB has firm plans to replace and reconfigure all 230 MFH units. Phase I is funded in FY 03 and will include 59 units. This housing renovation, even though plans are not yet complete, will undoubtedly include a substantial reconfiguration of the water distribution system in the MFH area. The latest information on this project and the methodology for potentially transitioning the water distribution system will be included in the technical library.)

J3.2.1.2 Inventory

Table 1 lists major components of the Vance AFB water distribution system included in the sale. Drawings used to develop the inventory were the Vance Comprehensive Plan Tab G-1, Sheet 1 (2001) and Water Storage Plan PD-1876, Sheet 3 (May 1998). A list of the existing utility meters for the potable water system was provided by the Installation and was also used in the development of the inventory components.

TABLE 1
Fixed Inventory
Water Distribution System - Vance AFB

Component	Size	Unit	Quantity	Construction Date
Pipe				
DI Pipe	2.0	LF	7,445	1942
DI Pipe	2.5	LF	1,058	1942
DI Pipe	3.0	LF	4,364	1942
DI Pipe	4.0	LF	788	1942
DI Pipe	6.0	LF	13,573	1942
AC Pipe (FH)	6.0	LF	11,500	1960
DI Pipe	8.0	LF	13,803	1942
DI Pipe	10.0	LF	11,475	1942
Storage Tanks				
Elevated Tank	500KGal	EA	1	1943
Ground Storage Tank	300KGal	EA	1	1960
Tank Aluminum Anode System		EA	2	1990
Reference Anode		EA	2	1990
Rectifier		EA	2	1990
Fire Hydrants				
Fire Hydrant		EA	94	1987
Fire Hydrant (FH)		EA	25	1984
Valves				
Gate Valve w/ Box	2.0	EA	90	1942
Gate Valve w/ Box	2.5	EA	7	1942
Gate Valve w/ Box	3.0	EA	21	1942
Gate Valve w/ Box	4.0	EA	7	1942
Gate Valve w/ Box	6.0	EA	39	1942
Gate Valve w/ Box	8.0	EA	27	1942
Gate Valve w/ Box	10.0	EA	12	1942
Gate Valve w/ Box (FH)	6.0	EA	14	1960
Residential Water Service				
DI Pipe	2.0	LF	17,250	1960
Service Connection		EA	230	1960
Gate Valve w/Box	2.0	EA	230	1960
Industrial Water Service				
DI Pipe	4.0	LF	10,000	1942
Gate Valve w/ Box	4.0	EA	100	1942
Booster Station				1942
Building		SF	500	1942
Pump Station (2-30HP)		HP	60	1999
Altitude Control Valve	8.0	EA	1	1999
Water Meter		EA	2	1980

Notes:
DI = ductile iron — AC = asbestos cement
FH = family housing — LF = linear feet
EA = each — SF = square feet
HP = horsepower — KGal = thousand gallons

J3.2.2 Water Distribution System Non-Fixed Equipment and Specialized Tools

Tables 2 and **3** would typically list other ancillary equipment (spare parts) and specialized vehicles and tools included in the purchase. However, Vance is a very small installation with a small, contracted O&M operation. The Installation does not maintain significant levels of spares (they are actually prohibited from maintaining such levels), nor is there

AC Pipe (FH) 6.0 LF 11,500 1960
Fire Hydrant (FH) 25 ea 25 1984
Gate Valves (FH) 6.0 ea 14 1960

pre-treatment plant (Building 258) for contaminated groundwater. The pre-treated effluent from both plants is then discharged into the sanitary wastewater collection system. The City of Enid has issued discharge permits for both pre-treatment facilities. Plant operators perform regular sampling and the City of Enid does occasional sampling to confirm compliance with the discharge permits. Since both of these plants, including their associated collection and extraction systems, are excluded from the privatization package, the O&M contractor will continue to operate them and the Government will retain responsibility for the permits.

Vance AFB has a small wastewater collection system at Kegelman Field. The wastewater collection system consists of a simple sewer line from the fire station to a septic tank and drain field. This system is excluded from the privatization package.

(Note that Vance AFB has firm plans to replace and reconfigure all 230 MFH units. Phase I is funded in FY 03 and will include 59 units. This housing renovation, even though plans are not yet complete, will undoubtedly include a total reconfiguration of the wastewater collection system in the MFH area. The latest information on this project and the methodology for potentially transitioning the wastewater collection system will be included in the technical library.)

J4.2.1.2 Inventory

Table 1 provides a general listing of the major wastewater collection system fixed assets for the Vance AFB wastewater collection system included in the sale. The Drawing used to develop the inventory was the Vance Comprehensive Plan Tab G-2, Sheet 1 (1958).

TABLE 1
Fixed Inventory
Wastewater Utility System - Vance AFB

Component	Size	Unit	Quantity	Construction Date
Pipe				
VC	3.0	LF	190	1942
VC	4.0	LF	805	1942
VC	6.0	LF	17,632	1942**
VC	8.0	LF	11,220	1942**
VC	10.0	LF	5,960	1942**
VC	12.0	LF	3,057	1942**
VC	15.0	LF	540	1942**
~~VC (FH)~~	~~8.0~~	~~LF~~	~~10,105~~ 0	~~1960*~~
CI	6.0	LF	1,840	1942
CI	3.0	LF	900	1942
PVC	3.0	EA	580	1992
PVC	3.0	EA	200	1999
Manholes				
~~Manholes (FH)~~	~~4x8~~	~~EA~~	~~33~~ 0	~~1960~~
Manholes	6x8	EA	106	1942
Lift Stations				
~~#1429, Large~~		~~EA~~	~~1~~ 0	~~1989~~

MFH

VC (FH)	8	lf	10,105	1960
Manholes (FH)	4x8	ea	33	1960
#1429, Large		ea	1	1989

~~#1429, Large, Bldg~~		EA	~~1~~ 0	~~1989~~
Near #901, Medium		EA	1	1942
Near #901, Medium, Bldg		EA	1	1942
Near #261, Small		EA	1	1992
Near #261, Small, Bldg		EA	1	1992
Near #141, Small		EA	1	1992
Near #141, Small, Bldg		EA	1	1992
Near #195, Small		EA	1	1992
Near #195, Small, Bldg		EA	1	1992
Residential Service				
PVC Pipe	4.0	LF	17,250	2000
CI Cleanout T	4.0	EA	230	2000
Industrial Service				
PVC Pipe	6.0	LF	10,000	1942
CI Cleanout T	6.0	EA	100	1942
Force Main			0	
~~Force Main LS#1429~~	~~6.0~~	~~LF~~	~~1,750~~	~~1989~~
Force Main LS#901	3.0	LF	260	1942
Force Main LS#901	6.0	LF	640	1942
Force Main LS#261	3.0	LF	625	1992
Force Main LS#195	6.0	LF	600	1992

Notes:
*Slip-lined in 1998
**Slip-lined in 1995
VC = vitrified clay
PVC = polyvinyl chloride
LF = linear feet
FH = family housing
CI = cast iron
LS = lift station
EA = each

Force Main LS#1429 6.0 LF 1,750 1989
MFH #1429 Large Bldg 1 ea 1 1989

J4.2.2 Wastewater collection system Non-Fixed Equipment and Specialized Tools

Tables 2 and **3** would typically list other ancillary equipment (spare parts) and specialized vehicles and tools included in the purchase. However, Vance is a very small installation with a small, contracted O&M operation. The Installation does not maintain significant levels of spares (they are actually prohibited from maintaining such levels), nor is there specialized equipment that could be made available for privatization. Hence, **Tables 2** and **3** reflect no items available for privatization.

TABLE 2
Spare Parts
Wastewater Utility System - Vance AFB

Quantity	Item	Make/Model	Description	Remarks
None				

TABLE 3
Specialized Vehicles and Tools
Wastewater Utility System - Vance AFB

Specifically excluded from the electric distribution system privatization:

- The airfield lighting system.
- Parking lot and area floodlights with controls inside adjacent buildings.

J1.2.1.1 Description

Oklahoma Gas and Electric (OG&E) supplies power to Vance AFB through a single 69-kilovolt (kV) transmission line into a substation located on the north end of the Installation, west of Hairston Gate. The substation is owned solely by OG&E. The main power transformer, steel bus support structure, disconnect switches, and master meter are owned by OG&E. The 69kV transmission line feeds a 69/12.47kV, 7500-kilovolt ampere (KVA) transformer. The 12.47kV distribution is fed underground to an AF-owned electrical switching station adjacent to the OG&E substation. The switching station is an outdoor metal-clad switchgear assembly configured in a main and transfer bus arrangement. It consists of six 15kV vacuum circuit breakers (five feeders and a transfer bus tie). There is also a "normally open" emergency feeder connection (between the OG&E-owned substation and the AF-owned switching station) tied to Circuit No. 3. This RTE 15kV switchgear unit with vacuum fault interrupter is also AF-owned.

The backbone of the electrical distribution system consists of five 12470/7200-volt three-phase feeders. The five feeder circuits exit the switching station underground and are installed in a concrete encased duct bank. Circuits 1, 2, and 5 are primarily underground circuits. (Approximately 1.0 percent of the underground (UG) duct bank is located under roadways.) Circuit 4 is a mixture of overhead and underground sections while Circuit 3 is mostly overhead. The UG cable runs are all copper cable and nearly all the overhead (OH) cable is aluminum conductor, steel reinforced (ACSR).

Circuits 1 and 2 serve the Flight Simulator Training Facility in Building 672. Circuit 3 serves a number of buildings and facilities on the north portion of the cantonment area, part of the flightline area and a large part of the airfield area (underground in this area). Circuit 4 serves the remaining portion of the cantonment area, the southern part of the flightline and airfield areas. A "normally open" sectionalizing switch on the west part of the airfield connects Circuits 3 and 4. This allows the area to be back-fed during certain outage situations. Circuit 5 feeds the family housing area in underground loops. Pad-mounted switches in the housing area allow sectionalizing for maintenance and operational convenience.

Though the basic electrical distribution system was initially constructed during the 1940–1950 time period, normal maintenance and Base expansion have prompted replacements and additions to most of the system components. The overhead primary circuits are installed on single wood pole structures with wood cross arms and pin type insulators. All poly chlorinated biphenyl (PCB)-contaminated components have been replaced.

Kegelman Auxiliary Airfield has very limited facilities with minimal electric service. The Kegelman electric system consists of secondary services and four small distribution transformers. These electrical components are incorporated into the overall inventory for Vance AFB.

(Note that Vance AFB has firm plans to replace and reconfigure all 230 MFH units. Phase I is funded in FY 03 and will include 59 units. This housing renovation, even though designs are not yet complete, will undoubtedly include a substantial reconfiguration of the electric distribution system in the MFH area. The latest information on this project and the methodology for potentially transitioning the electrical distribution system will be included in the technical library.)

J1.2.1.2 Inventory

Table 1 provides a general listing of the major electric distribution system fixed assets for the Vance AFB electric distribution system included in the sale. Drawings used to develop the inventory were the Vance Comprehensive Plan Tab G-4, Sheets 2 and 3 of 7 (1989, updated 2000), Tab G-4, Sheet 4 (2001) and Tab G-4, Sheet 5 (1990). A list of the existing utility meters for the electric system was provided by the Installation and was also used in the development of the inventory components.

TABLE 1
Fixed Inventory
Electric Distribution System - Vance AFB

Component	Size	Unit	Quantity	Construction Date
Switchgear				
Substation, Circuit Breakers, Vacuum	13-26 kV	EA	7	1990
Substation, Control Batteries		EA	1	1990
Substation, Lightning Arresters	13-26 kV	EA	5	1990
Substation, Transformers, PT	13-26 kV	EA	45	1990
Gang Op Switches	3 PH	EA	5	1990
Concrete Slab	6″	SF	960	1990
Grading, SubGrade w/ Compaction		SY	130	1990
Grading, Gravel w/ Compaction		SY	130	1990
Crushed Stone Aggregate		Tons	24	1990
Underground Line				
UG Cable 4/0	15 kV	LF	28,440	2003
UG Cable 4/0	15 kV	LF	22,800	1988
UG Cable 4/0	15 kV	LF	16,296	1990
UG Cable 1/0	15 kV	LF	9,480	2003
UG Cable 1/0	15 kV	LF	7,600	1988
UG Cable 1/0	15 kV	LF	5,432	1990
UG Cable 350 MCM	15 kV	LF	41,985	2001
UG Cable 350 MCM Neutral	600V	LF	13,995	2001
Overhead Line				
OH Cable 1-#4/0 ACSR	4/0	LF	590	1990
OH Cable 1-#4/0 ACSR	4/0	LF	1,090	2001
OH Cable 1-#3/0 ACSR	3/0	LF	680	2001
OH Cable 1-#1/0 ACSR	1/0	LF	415	2001
OH Cable 1-#4 ACSR	#4	LF	780	2001
OH Cable 2-#2 ACSR	#2	LF	2,080	2001
OH Cable 3-#2/0 ACSR	2/0	LF	2,340	2001
OH Cable 3-#2 ACSR	#2	LF	465	2001
OH Cable 3-#336 ACSR	#336	LF	6,555	2001
OH Cable 4-#4/0 ACSR	4/0	LF	6,760	2001
OH Cable 4-#2 ACSR	#2	LF	24,540	1990
OH Cable 4-#2 ACSR	#2	LF	20,960	2001
OH Cable 4-#4 ACSR	#4	LF	2,100	1990
OH Cable 4-#4 ACSR	#4	LF	680	2001

Component	Size	Unit	Quantity	Construction Date
OH Cable 1-#2 CU	#2	LF	950	1990
OH Cable 3-#3/0 CU	3/0	LF	1,770	1990
OH Cable 3-#2/0 CU	2/0	LF	2,850	1990
OH Cable 3-#2/0 CU	2/0	LF	1,125	2001
OH Cable 3-#2 CU	#2	LF	375	2001
OH Cable 4-#6 CU	#6	LF	440	1990
Secondary				
Secondary, UG 1/0	15 kV	LF	7,500	1988
Secondary, OH 1/0	15 kV	LF	16,590	1988
Ductbank				
Ductbank - 4" PVC	1x2	LF	8,030	1981
Ductbank - 4" PVC	1x2	LF	~~75,480~~ 57,280	1981
Ductbank - 4" PVC	1x2	LF	73,707	1988
Terminator Cable				
Terminator Cable, UG	15 kV	EA	180	1981
Terminator Cable, UG	15 kV	EA	77	1981
Terminator Cable (Transf)	25 kV	EA	351	1981
Transformers – Pole-Mount				
Transformers, Pole, 1 PH	5 kVA	EA	3	1981
Transformers, Pole, 1 PH	10 kVA	EA	15	1981
Transformers, Pole, 1 PH	15 kVA	EA	24	1981
Transformers, Pole, 1 PH	25 kVA	EA	29	1981
Transformers, Pole, 1 PH	37.5 kVA	EA	54	1981
Transformers, Pole, 1 PH	50 kVA	EA	26	1981
Transformers, Pole, 1 PH	75 kVA	EA	6	1981
Transformers, Pole, 1 PH	100 kVA	EA	3	1981
Transformers, Pole, 1 PH	167 kVA	EA	3	1981
Transformers – Pad-Mount				
Transformers, Pad, 1 PH	15 kVA	EA	4	1981
Transformers, Pad, 1 PH	25 kVA	EA	3	1981
Transformers, Pad, 1 PH	37.5 kVA	EA	3	1981
Transformers, Pad, 1 PH	50 kVA	EA	~~42~~ 9	1981
Transformers, Pad, 1 PH	100 kVA	EA	1	1981
Transformers, Pad, 1 PH	167 kVA	EA	9	1981
Transformers, Pad, 3 PH	45 kVA	EA	~~2~~ 1	1981
Transformers, Pad, 3 PH	75 kVA	EA	~~5~~ 4	1981
Transformers, Pad, 3 PH	112.5 kVA	EA	3	1981
Transformers, Pad, 3 PH	150 kVA	EA	5	1981
Transformers, Pad, 3 PH	225 kVA	EA	8	1981
Transformers, Pad, 3 PH	300 kVA	EA	5	1981
Transformers, Pad, 3 PH	500 kVA	EA	3	1981
Transformers, Pad, 3 PH	750 kVA	EA	11	1981
Street Lights				
Fixtures, HPS	100 watt	EA	~~151~~ 106	1981
Fixtures, HPS	150 watt	EA	53	1981
Fixtures, HPS	250 watt	EA	15	1981
Fixtures, HPS	500 watt	EA	2	1981
Fixtures, MV	400 watt	EA	1	1981
Fixtures, LPS	55 watt	EA	3	1981
Poles, Wood	40 ft	EA	100	1981
Poles, Steel	30 ft	EA	48	1981
Poles, Concrete	40 ft	EA	10	1981
Poles, Concrete	30 ft	EA	~~45~~ 0	1981
Poles, Alum	30 ft	EA	10	1981
Wire, Copper, OH	600V, #6	LF	24,140	1981
Wire, Copper, UG	600V, #8	LF	19,110	1981

Component	Size	Unit	Quantity	Construction Date
Additional Inventory				
Meters	3 PH	EA	52	1981
Guys, Anchors	-	EA	79	1981
Lightning Arrestors	13-26 kV	EA	179	1981
Load Interrupter Switch	13.8 kV	EA	1	1981
Pole, Wood	40 ft	EA	117	1981
Cross Arms	6' L	EA	117	1981
Conductor	600 volt	LF	94,500	1981
Conductor – UG #1/0	1/0	LF	~~52,960~~ 0	1981
Conductor – UG #4/0	4/0	LF	~~22,520~~ 0	1981
Manholes	4x6	EA	~~21~~ 18	1981
Sectionalizing Switches		EA	~~14~~ 13	1981
Disconnect Switches	1 PH	EA	~~41~~ 35	1981
Deadends/Joints		EA	30	1981

Notes:
UG = underground
OH = overhead
ACSR = aluminum conductor, steel reinforced
CU = copper
PVC = polyvinyl chloride
SF = square foot
EA = each
MCM = thousand circular mils
MV = medium voltage
PH = phase
kV = kilovolt
kVA = kilovolt ampere
ft = feet
LF = linear feet
SY = square yard
HPS = high pressure sodium
LPS = low pressure sodium

J1.2.2 Electric Distribution System Non-Fixed Equipment and Specialized Tools

Tables 2 and **3** would typically list other ancillary equipment (spare parts) and specialized vehicles and tools included in the purchase. However, Vance is a very small installation with a small, contracted O&M operation. The Installation does not maintain significant levels of spares (they are actually prohibited from maintaining such levels), nor is there specialized equipment that could be made available for privatization. Hence, **Tables 2** and **3** reflect no items available for privatization.

TABLE 2
Spare Parts
Electric Distribution System - Vance AFB

Quantity	Item	Make/Model	Description	Remarks
None				