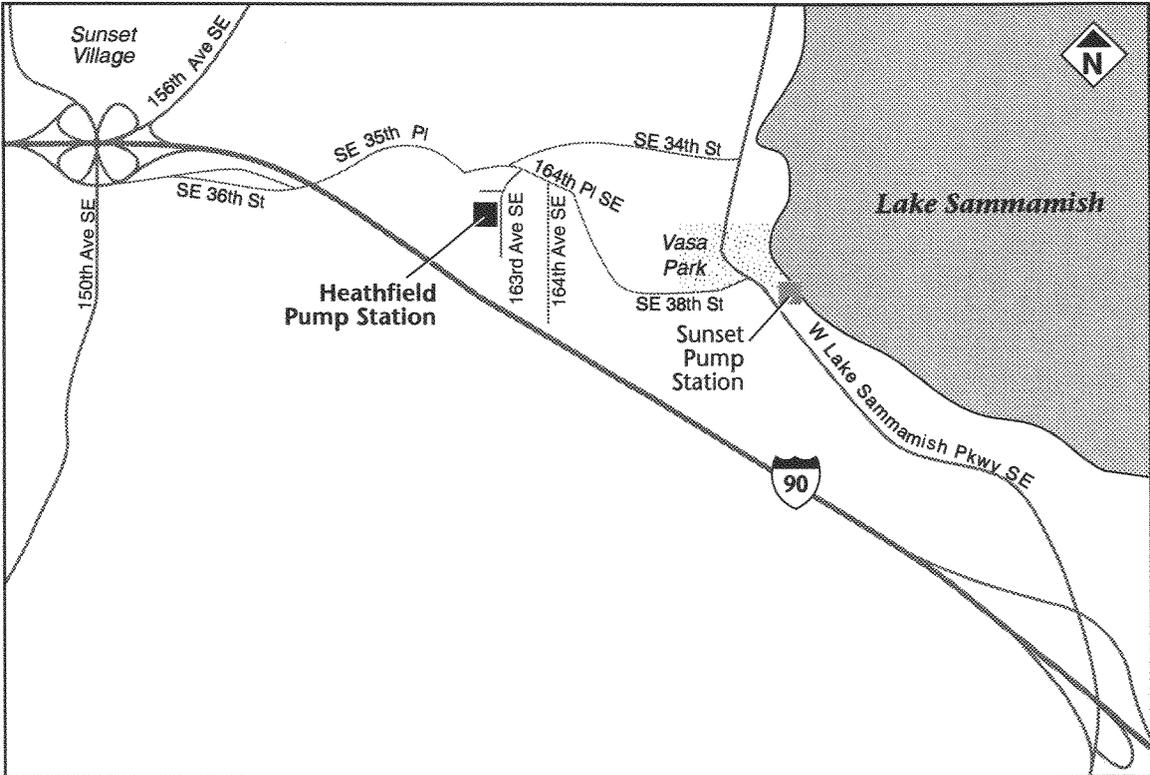


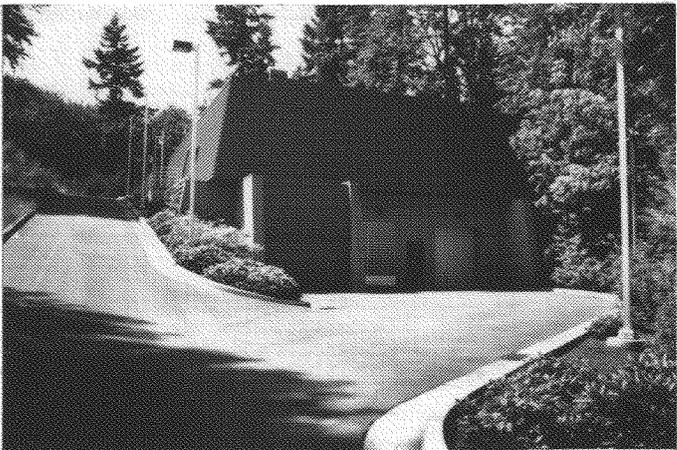
HEATHFIELD PUMP STATION

3541 163rd Avenue SE, Bellevue

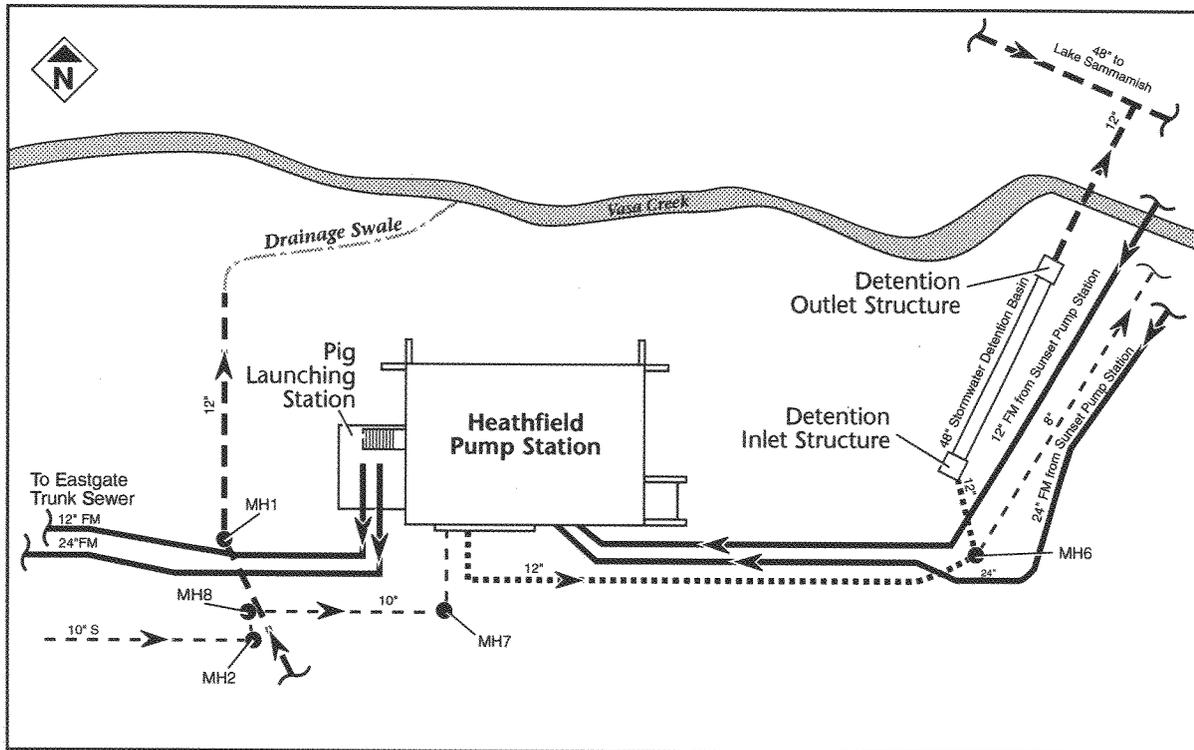
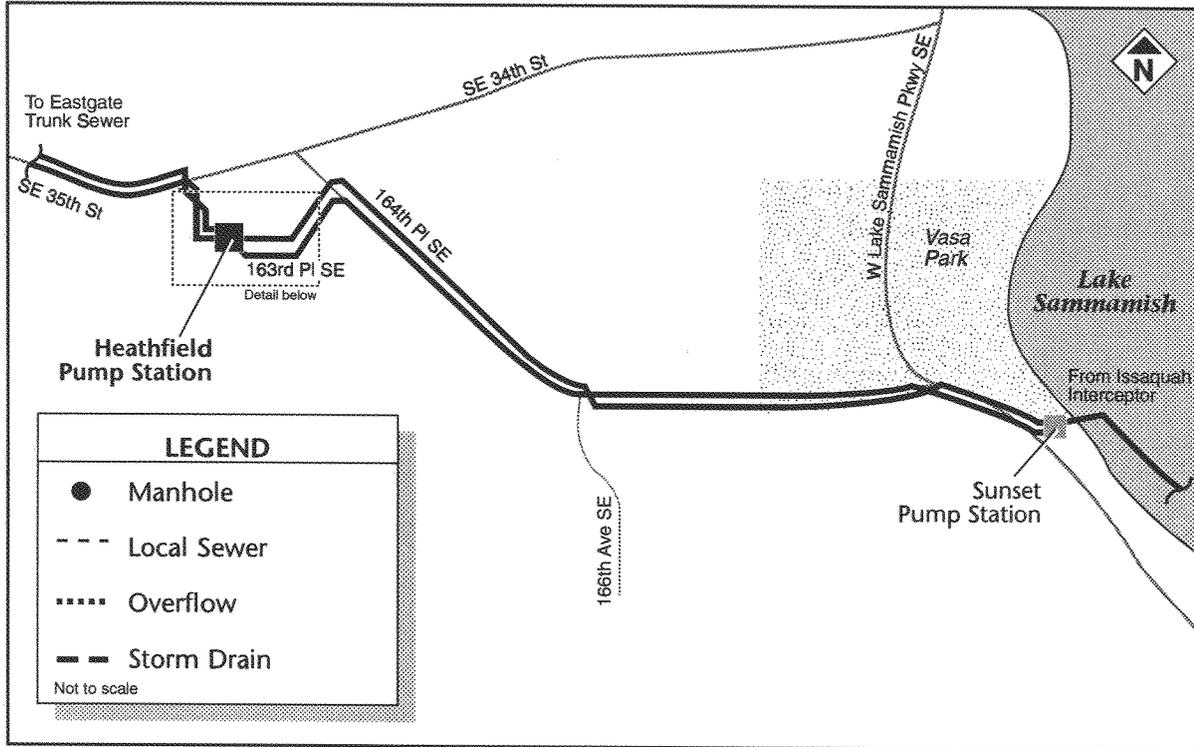


Directions

From I-90 East, take the 150th Avenue SE Exit, and continue past the traffic signal onto SE 36th Street. Pass through the tunnel, which passes underneath I-90, and onto SE 35th Place (Vasa Park Road). Turn right on 163rd Avenue SE. The station is on the right-hand side of the road.



Heathfield Pump Station



One-Line Drawing

System Relationship

The station receives wastewater flow from the Sunset Pump Station through two force mains (12- and 24-inch-diameter) that are 3,220 feet long. The station pumps wastewater to the Eastgate Trunk through two force mains (12- and 24-inch-diameter) that are 1,650 feet long. Discharge to the Eastgate Trunk must be limited to 15 mgd to avoid overflows in the immediate area.

Flow Information (mgd)

	<u>1985</u>	<u>2005</u>
Average Dry Weather:	0.1	2.3
Peak Wet Weather:	14.0	
Maximum Pumping Capacity:	23.4	
Maximum Allowable Flow:	25.0	

Critical Information

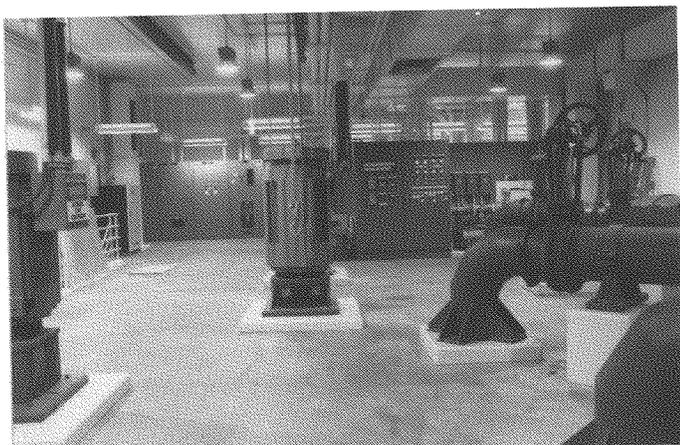
Emergency Power: Dual source

WARNING
<i>Storage times represent the time allowed from shutdown to overflow under normal dry weather conditions. Storage times depend directly on weather conditions and condition of the pipes, and times must be adjusted accordingly.</i>

Storage Time: None (24 hours in Issaquah Interceptor upstream of Sunset Pump Station)

Overflow Elevation: 163.00 feet

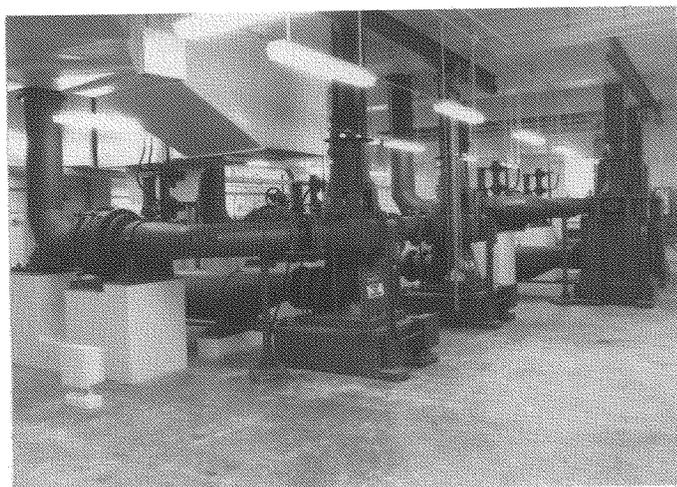
Overflow Location: Lake Sammamish; through 48-inch-diameter storm drain next to Sunset Pump Station



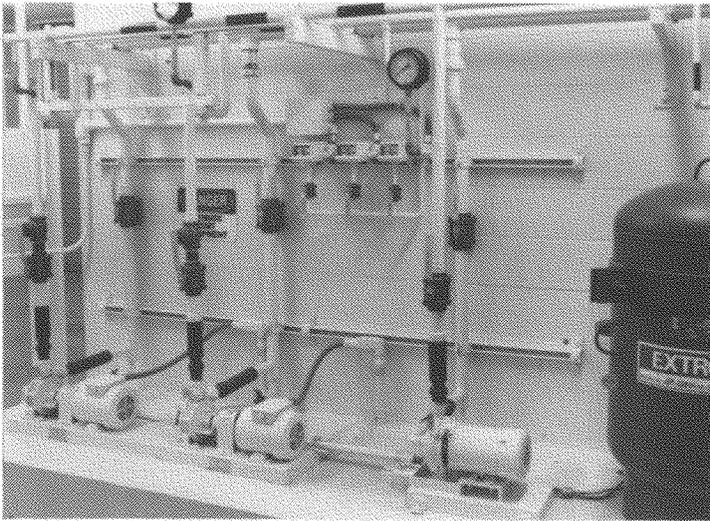
Motor and Control Room



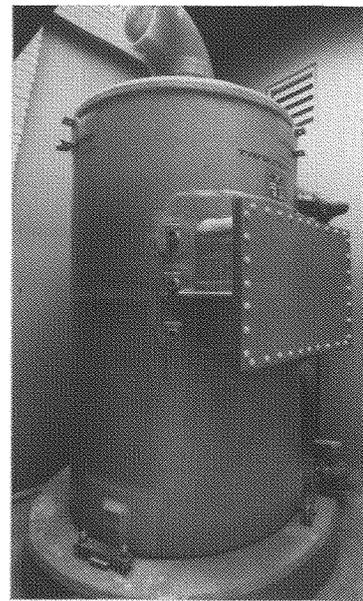
Control Room (VFDs)



Pump Room



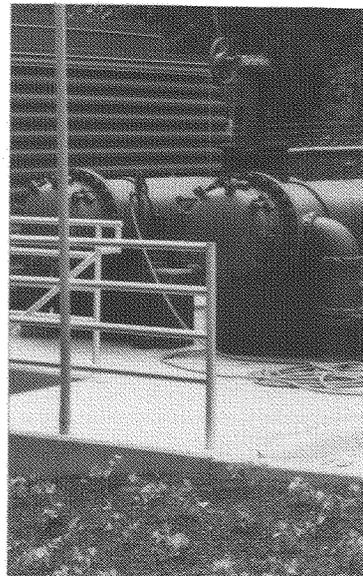
Pump Room (Seal Water System)



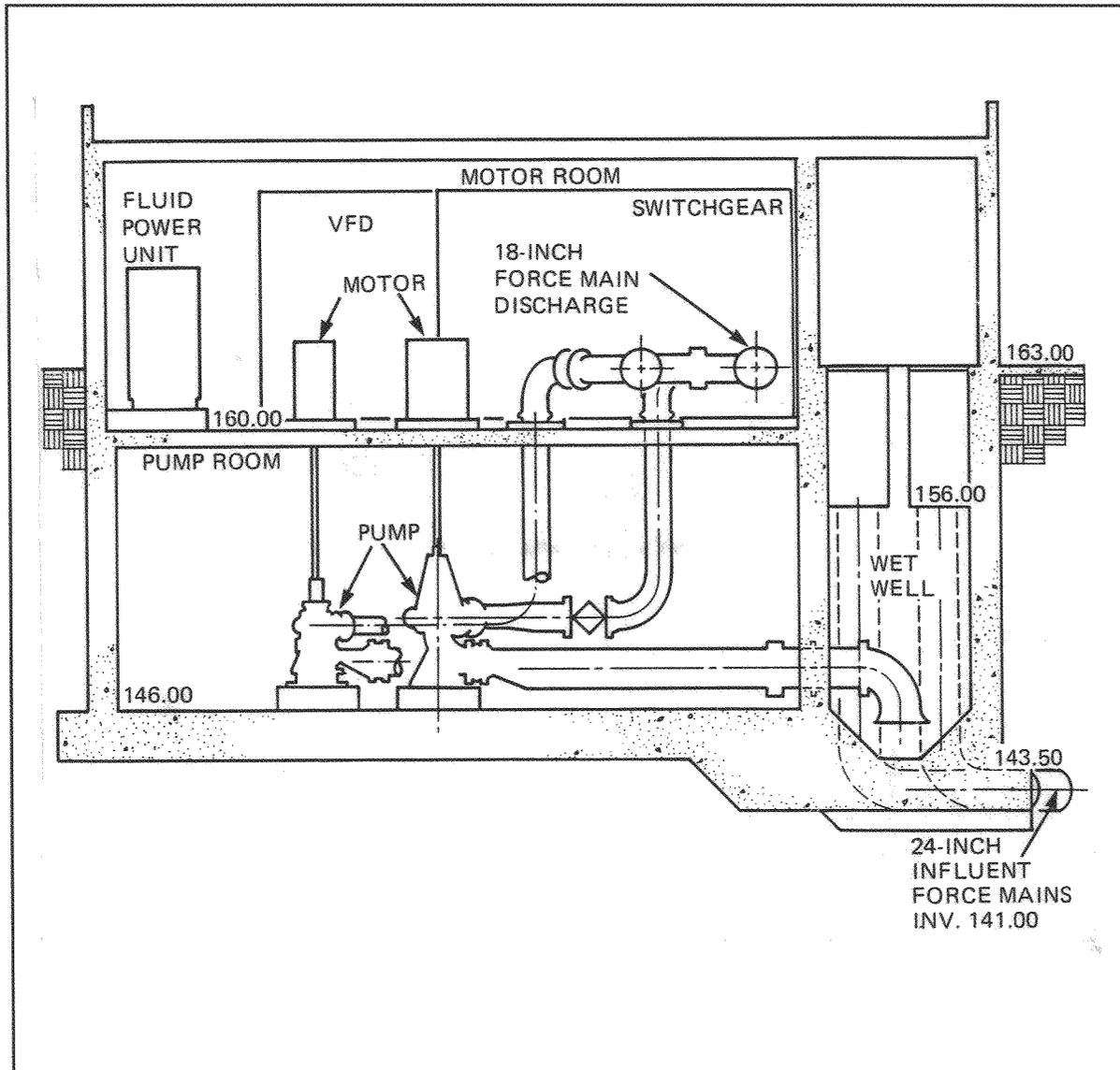
Odor Control
(Carbon Filter Unit)



Wet Well



Pig Launchers



Station Cross Section

Construction Information		
Contract	Date Complete	Cost
65-2: Built Sunset and Heathfield Pump Stations; started 3/65; Mottner and McCutchen	12/65	\$326,640
W/M8-82: Installed 24-inch-diameter force main between Sunset and Heathfield Pump Stations; Universal Utility	5/83	\$590,100
W/M47-84: Replaced Sunset and Heathfield Pump Stations; started 9/85; Venture Construction	9/87	\$6,267,718
W/M24-88: Made improvement to landscaping, sumps, sewer, and ventilation at Heathfield and Sunset Pump Stations; Harbor Pacific Contractor, Inc.	6/89	\$313,029

Equipment Information	
Components	Characteristics
Raw Sewage Pump System (4 Units)	
Pumping Unit 1	
Pump	Wemco-Hydrostal screw centrifugal pump, model I6K-S-I7S, vertical arrangement A; 3.7 mgd against 169 ft TDH; s/n 8510365-3
Motor	Westinghouse vertical solid shaft motor: 200 hp, 1,170 rpm; WP 1 enclosure; frame No. 449 HP 16; 3-phase, 60 cycle, 460 V
Variable Frequency Controller	Westinghouse, variable frequency controller, Accutrol 300; rating: 200 hp
Pumping Unit 2	
Pump	Same as No. 1, except s/n 8510365-4
Motor	Same as No. 1, except s/n 8603-01-003
Variable Frequency Controller	Same as No. 1, except s/n _____
Pumping Unit 3	
Pump	Worthington Pump Div., Dresser Industries, Inc., vertical nonclog centrifugal pump, size 12MNV-24; capacity: 11 mgd against 169 ft TDH, s/n 852US-8368-1
Motor	Westinghouse AC motor; rating: 450 hp, 1187 rpm, frame no. 5010 3UP24, s/n 4-1755603
Variable Frequency Controller	Same as No. 1, except rating of 500 hp

Equipment Information (continued)	
Components	Characteristics
Raw Sewage Pump System (4 Units) (continued)	
Pumping Unit 4	
Pump	Same as No. 3, except s/n 85ZUS-8368-2
Motor	Same as No. 3, except s/n 2-17SS603
Variable Frequency Controller	Same as No. 3, except s/n _____
Electrical Systems	
Utility Power	Puget Power (Dual Power Source)
UPS	_____
Fluid Power System	
Power Unit (Discharge Ball Valve Control)	Western Fluid Power
Oil Pumps (2)	HYDURA, type PFQ, fixed displacement pump; capacity: 6 gpm at 2,000 psig; p/n PFW-06LSAY
Motors (2)	General Electric, frame 184T; rating: 5 hp, 1,740 rpm, 230/460 V, 13.6/6.8 FLA, 3-phase
Reservoir	Capacity: 109 gallons
Water Systems	
C1 Water	
Water Service	2-in incoming service; meter located _____
Backflow Preventer	Hersey-Beeco, model 16C, 1-in; s/n 29100
C2 Water	
Pumps (2)	Aurora Pump, turbine pumps, model 114-115-116 single stage; capacity: 2 gpm against 254 ft TDH; motor rating: 1.5 hp
Bladder Tank	Capacity: 34 gallons; operating pressure: 110 psig
Washdown Water	
Pump	Aurora Pump, end suction centrifugal pump, model 321 (GAHA); capacity: 30 gpm against 92 ft TDH; motor rating: 2 hp

Equipment Information (continued)	
Components	Characteristics
Instrument Air System	
Compressors (2)	Pneumotive Air Power Products, model SYCGH16-1; two-stage, 175 lb GH compressor; discharge: 125 psig; capacity: 1.6 scfm; motor rating: 0.5 hp
Receiver	Capacity: 30 gallons
Air Dryer	Wilkerson Corp. (Refrigerated Dryer); model A00-AH-P00; rated capacity: 39°F (4°C) PDP @ 5 scfm; 50°F (10°C) PDP @ 7 scfm; 115 Vac, single phase, 60 Hz; s/n 03-13-87-2019
Heating and Ventilation System	
Return Air Fan	Greenheck; capacity: 12,450 scfm; fan speed: 1,200 rpm
Motor	Marathon Electric, standard induction motor; rating: 7.5 hp, 460 V
Supply Air Fan	Kees Fans, Inc.; capacity: 13,200 scfm; fan speed: 1,000 rpm
Motor	Rating: 5 hp, 460 V
Wet Well Transfer Fan	Greenheck; capacity: 1,500/750 scfm; fan speed: 1,750 rpm
Motor	Rating: 0.5 hp, 460 V
Wet Well Exhaust Fan	New York Blower; capacity: 800 scfm; fan speed: 1,600 rpm; motor rating: 0.25 hp, 115 V
Washroom Exhaust Fan	Greenheck; capacity: 200 scfm; fan speed: 1,050 rpm; motor rating: 0.025 hp, 115 V
Drainage System	
Sump Pumps (2)	Aurora Pumps, wet pit nonclog, model 631-632 (KS B); capacity: 280 gpm against 35 ft TDH
Motors (2)	Leroy-Somer, Inc., Powerbloc; rating: 5 hp, 1,750 rpm, 460 V, 3-phase, 60 Hz
Bubbler	_____
Odor Control System	
Odor Scrubber Unit	Westates Carbon Co., type UOC-H activated carbon; capacity: 2,000 lbs
Carbon Filter Fan	New York Blower; capacity: 800 cfm; fan speed: 3,000 rpm; motor rating: 3 hp, 460 V

Equipment Information (continued)	
Components	Characteristics
Control and Monitoring System	
PLC	_____
Bubbler	_____
Metrotel II	_____
Miscellaneous	
Monorail Hoists (4)	ACCO, trolley-suspended, series 15; capacity: 3 tons; vertical lift: 16 ft