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BRAWLEY 10 MW GEOTHERMAL PLANT

**SOUTHERN CALIFORNIA EDISON COMPANY
AND
UNION OIL COMPANY OF CALIFORNIA**

Donated By:
Herbert Rogers Jr.
Rogers Engineering Co.

PLANT MANUAL

EQUIPMENT SPARE PARTS

VOLUME V

**FINAL SUBMITTAL
RECORD PRINT**

November 28, 1980

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**BRAWLEY
10 MW GEOTHERMAL PLANT**

**SOUTHERN CALIFORNIA EDISON COMPANY
AND
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**PLANT MANUAL
EQUIPMENT SPARE PARTS
VOLUME V**

ROGERS
Engineering • San Francisco

NOV 28 1980

PLANT MANUAL

Volume I Systems Descriptions

Presents each system of the facility and discusses basic features. Brief discussion of each piece of major equipment in system and design conditions.

Volume II Systems Start-up and Operations

Each system within the facility is considered from an operation viewpoint. There are five subsegments within this operation's viewpoint. Prerequisite conditions, start-up, normal operating, emergency and shutdown.

Volume III Drawings and Diagrams

The plant design drawings and diagrams are presented. A list of all drawings and an index of drawings included in the book are in Section 1. The design drawings data in this book is for general plant understanding.

Volume IV Equipment Data

This volume has technical presentations on each piece of plant equipment. It also references manufacturer's instruction books and drawing lists.

Volume V Equipment Spare Parts

This volume presents the spare parts list for each piece of equipment and references the Material Requisition on which each piece of equipment was purchased.

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PLANT MANUAL

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BY
MATERIAL REQUISITION NUMBER

The first 5 digits of the RECo V.P. No. are the appropriate Material Requisition Number

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10-101-1-	73-5731	3'-0" I. D. Vacuum Comp. Seal Water Separator
10-102-1-	D-22854	Inline Vane Type Separator Model:95-24-60
10-102-2-	B-22856	20"-150" Vertical Manaway Divit
10-102-3-	1M-12-77HP	Installation and Operating Instruction for PECO Series 95 Vane Mist Eliminator
10-102-4-	D-22855	Special 20D Vane Bundle W/Removable Vanes
10-102-5-	A-22960	Left Ring for Vane Bundles
10-102-6-	A-23070	24"-150 ANSI Flange & Blind Manway Hinge
10-102-7-	A-22880	Hooks Vane Material: #20GA. - 40S/S
10-102-8-	A-23082	(1) One Plate 3/8" TK SA240-401S/S Cutting Layout
10-102-9-	A-22881	3" O. D. x 2 3/4" I. D. x 6 7/8" LG SMLS Tubing Equipment No. 10-2
10-102-10-	-	Manufacturers Data Report and Records
10-103-1-	-	Form U-1A Manufacturer's Data Report for Pressure Vessels
10-103-2-	V-80-R	Vertical Air Tank
10-103-3-	B0116-D1	Sollac/Solmer Certificat de Controle des Produits par L'Usine - Head
10-103-4-	-	Sollac/Solmer Certificat de Controle des Produits par L'Usine - Shell
10-104-1-	9012-C-1	18" O. D. x 30" SM./SM. Sulphuric Acid Day Tank Equipment No. 10-4 Dimension Dwg.
10-104-2-	-	Operation and Maintenance Instruction for Pressure Vessels and Nonpressure Vessels
11-101-1-	T408-1 D1 of 2	One Tank 9'-0" O. D. 9'-0" High Tag 11-2
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11-102-1-	C ₁ 4152	LVT-91
11-103-1-	CG-1102-2	Fiberglas Underground Tank Modifications, Notes and Accessories
12-101-1-	23964M	Main Condenser Outline
12-101-2-	23964M-1	Inter-condenser ¹
12-101-3-	A-27426-11	First Stage Ejector

RECo V.P. No.	V. D. No.	Drawing Title
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12-101-5-	D-27416-1	82" Surface Condenser
12-101-6-	D-27416-21	30" Inter-condenser
12-101-7-	B-27416-101	Shipping Diagram
12-101-8-	GMC-1004	Steam Jet Ejector Performances First Stage Ejector Suction
12-101-9-	GMC-1012	Exchanger Specification Sheet for Steam Surface Condenser
12-101-10-	GMC-1012	Exchanger Specification Sheet for Inter-condenser (CEN)
12-101-11-	Curve No. 23964M-1	First Stage Ejector of a Two Stage Ejector
12-101-12-	Curve No. 23964M-2	Second Stage Ejector of a Two Stage Ejector
12-101-13-	23964M	82" Surface Condenser Data Report for Pressure Vessels
12-101-14-	23964JC	1850B-80 Ejector Data Report for Pressure Vessels
12-101-15-	23964JC	140C-80 Ejector Data Report for Pressure Vessels
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12-102-14	-	Performance Curves 90% GPM, 100% GPM, 110% GPM
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12-103-3-	C-27624-1	Plate Heat Exchanger
12-103-4-	A-27624-2	Flow Diagram
12-103-5-	25478PE	Form U-1 Manufacturer's Data Report
	NB-26	For Pressure Vessels
12-103-6-	-----	Name Plate for Heat Exchanger
12-104-1-	C-28257-1	Sigma 17 Plate Exchanger
12-104-2-	NB-26	Form U-1 Manufacturer's Data Report for Pressure Vessels - Unit #1 Tag No. 12-5A&B
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12-104-4-	-	Certification - 12 Plate Type: Sigma 17W
12-104-5-	Serial No. 2768-1&2	Plate Exchanger Part List
12-104-6-	-	Operating Instructions Sigma Plate Heat Exchangers
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14-101-3-	992C399EX	General Electric Conduit Box
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14-101-6-	491HA643	Performance Curves
14-101-7-	152B7075BD	Motor Outline
14-101-8-	-----	Reed Critical Frequency Data
14-101-9-	GEH-3292C	Motor Instruction Manual
14-101-10-	114B4482 FX	Connection Diagram
14-101-11-	7104	PTC Thermistors
14-101-12-	-----	Wiring Instructions
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14-101-19-	T-38115-1	Performance Curve - 28RXM - 1st Stage V. C. 793-W-0781
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14-102-2-	602531-905	Dimension Sheet
14-102-3-	E5368A-B-003	A-C Motor Performance Data
14-102-4-	B-3620-11	Instruction Manual
14-102-5-	60698843	Bill of Material
14-102-6-	D-1161	Centrifugal Pump
14-102-7-	2014-E2	Instruction for Centrifugal Pump
14-102-8-	Curve No. A20850	Performance Curve - Condensate Pump Tag #14-4A
14-102-9-	Curve No. A20851	Performance Curve - Condensate Pump Tag #14-4A
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14-103-3-	Section 115 Page 75	Flanged Type Couplings
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17-102-27-	6337 Sh. 5	Wiring Diagram Section #2 4160V Indoor Switchgear
17-102-28-	6337 Sh. 6	Wiring Diagram Section #3 4160V Indoor Switchgear
17-102-29-	6337 Sh. 7	Wiring Diagram Section #5 Front & Rear 4160V Indoor Switchgear
17-102-30-	6337 Sh. 8	Wiring Diagram Section #6A, 6B, 7B 4160 Indoor Switchgear Motor Starters
17-102-31-	6337 Sh. 9	Wiring Diagram Section 6R, Steam Gathering 4160 Indoor Switchgear
17-102-32-	6337 Sh. 10	Wiring Diagram Section 5 - IID Metering 4160V Indoor Switchgear
17-102-33-	6337 Sh. 11	Parts Manuals & Operation & Maintenance Instructions
17-104-1-	Data 921-C	Wiring Diagram DC Relay Operated CZ, CX and CV
17-104-2-	Data 1030-A	Location of Electrical Components CXE, CVE and CZE
17-104-3-	KCE100Y	Heater Assembly
17-104-4-	Data 919-B	Elementary Diagram DC Relay Operated CZ, CX and CV

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17-104-5-	KCE-138Y	Factory Assembly of Tank Heater Access with Thermostat for CXE, CVE and CZE
17-104-6-	Data 1069-C	Outline and Mounting Dimensions for CZ, CZE, CX, CXE, CV and CVE
17-104-7-	618-C	Frame Mounting Dimensions for CXE and CVE Recloser
17-104-8-	S280-55-3	Type CXE Installation Instructions
17-104-9-	S280-55	Type CXE Three Phase Electronically Controlled
17-104-10-	S280-85	Mounting Equipment
17-104-11-	3	Certified Engineering Test Report
17-104-12-	-----	Spare Parts for Type CXE Recloser
17-105-1	185C5707	Outline
17-105-2-	263A6484	Transformer Nameplate
17-105-3-	GEK-73183	Transformer Instructions
17-105-4-	MT-275	Transformer Test Report
17-106-1-	D49-64688-1	Motor Control Data
17-106-2-	B49-64688-DW-1	Connection Diagram
17-106-3-	A30318-497	Connection Diagram for Control Center Unit
17-106-4-	A49-64688-WD2	Gnd. Ind. Wiring Diagram
17-106-5-	A49-64688-WD3	Typical Wiring Motor Starter
17-106-6-	A49-64688-WD3A	Typical Wiring Motor Starter
17-106-7-	A49-64688-WD4	Typical Wiring Starter Motor
17-106-8-	A49-64688-WD5	Typical Wiring Motor Starter
17-106-9-	29-926	Westinghouse Bulletin on Switches
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17-106-10-	A49-64688-WD3B	Typical Wiring Motor Starter
17-106-11-	A49-64688-WD3C	Typical Wiring Motor Starter
17-106-12	A49-64688-WD4B	Typical Wiring Motor Starter
17-106-13-	A49-64688-WD4C	Typical Wiring Motor Starter
17-106-14-	A49-64688-WD4A	Typical Wiring Motor Starter
17-106-15-	A30318-498	Connection Diagram of Control Center Unit
17-106-16-	-	Operating, Maintenance & Spare Part List
17-107-1-	Article No. 4725-64-06445	Installation, Operation & Maintenance
17-107-2-	-	Ground Fault Alarm - Description & Adjustment Instruction
17-108-1	S-3663	General Dimensions of Armor Line Motors
17-108-2-	E-040021-0005	Outline Drawing
17-108-3-	B44EJ-4-250-636 (M3187)	Motor Data Sheet
17-108-4-	M3126	Report of Test - Induction Motor
17-108-5-	C517	Operating Instructions

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17-109-1-	L-91230	Assembly - Type MK-40A Switch
17-109-2-	110382	(Steel) Channel Base
17-109-3-	57400	"FL" Clamp Type Terminal Lug
17-109-4-	162580X7	Unit Type "RLG" Grounding Switch
17-109-5-	162580X7-B	Unit Type "RLG" Grounding Switch
	GR. 3-M	
17-109-6-	57406	"FU" Clamp Type Terminal Lug
17-109-7-	43245X34	Live Parts for MK-40A Switch
17-109-8-	T-150055X40-M	List of Material
17-109-9-	T-150055X41-M	List of Material
17-110-1-	4520-1	Line Takeoff and Line Disconnect Support Structure (Item No. 2)
17-110-2-	4520-1	Line Takeoff and Line Disconnect Support Structure (Item No. 2)
17-110-3-	4520-3	Recloser Isolating Disconnect Switch Support Structure (Item No. 3)
17-110-4-	4520-4	Bus Support Structure (Item No. 4)
17-110-5-	4520-5	Bus Support Structure (Item No. 4)
17-110-6-	4520-6	Potential Transformer Support Structure (Item No. 5) Current Transformer Support Structure (Item No. 6)
17-111-1-	E-0340 CP-1	Plan
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17-111-2-	E-0340 CP-2	Details
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17-111-3-	-	Cathodic Protection Design Survey Coated Steel Fire Loop - Data, Design Analysis, Drawings, Material List
18-101-1-	P00-0001	10,000 kW Geothermal Modular 10 Portable Turbine Base Plan (This is not a plan)
18-101-2-	P00-0003	10,000 kW Geothermal Modular 10 Portable T/G Outline
18-101-3-	CL50204	General Assembly of Air Coolers for Turbine Generator
18-101-4-	C191503	Typical Local Panel for Turbine Startup
18-101-5-	CL55679	Outline, Generator
18-101-6-	QAT-P304-1	Factory Inspections and Tests Turbine and Acces- sories (2 sheets)
18-101-7-	CH81493	Outline, Air Blower for Generator Cooling
18-101-8	CH81494	Arrangement, Air Make Up System, Generator Cooling
18-101-9-	P00-0201	P&ID, Control and Lube Oil
18-101-10-	P00-0202	P&ID, Lube Oil System
18-101-11-	P00-0203	P&ID, Main Steam & Condensate Drains
18-101-12-	K307AN418-	Specifications, Excitation Unit
18-101-13-	CL55687-	Piping Arrangement Generator Air Cooler

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18-101-14-	CH40369-
18-101-15-	K320AN418-A
18-101-16-	CZ01495
	Sh. G00
18-101-17-	CZ01495
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18-101-18-	CZ01495
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18-101-19-	CZ01495
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18-101-20-	CZ01495
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18-101-21-	CZ01495
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18-101-22-	CZ01495
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18-101-23-	CZ01495
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18-101-24-	CZ01495
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18-101-25-	CZ01495
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18-101-26-	CZ01495
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18-101-28-	CZ01495
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18-101-29-	CZ01495
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18-101-30-	CZ01495
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18-101-31-	K323AN418
18-101-32-	CL55729
18-101-33-	C195227
18-101-34-	TS-3210AA1
18-101-35-	M00-0093
18-101-37-	C142170
18-101-38-	CH93830
18-101-39-	CL28652
18-101-40-	T-9966
18-101-41-	K050AN418
18-101-42-	CN99645
18-101-43-	CN99646
18-101-44-	C195246
18-101-45-	74-36545-0

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18-101-46-	CL28653	Outline of Generator Mounted Cubicle
18-101-47-	K043AN418	Parts List for Excitation Panel
18-101-48-	K043BN418	Parts List for Generator Mounted Cubicle
18-101-49-	CL60657	Parts Arrangement of Generator Mounted Cubicle
18-101-50-	C142171	Connection Diagram
18-101-51-	M00-0130	Rotor Dynamic Balancing and Over Speed
18-101-52-	CE3400	Expected Characteristics A. C. Turning Oil Pump
18-101-53-	M00-2032	Motor List
18-101-54-	61000-3001	Instrument List
18-101-55-	63000-1023	Turbine Interlock Diagram
18-101-56-	64323-0001	Oil Cooler Sectional Assembly
18-101-57-	K665BN418	Outline Dimension of Turbine Supervisory Instruments
18-101-58-	61000-3011	Alarm List
18-101-59-	41142-0001	Bed and Oil Tank Foundation Bolt and Chock Arrangement
18-101-60-	P00-0010	Thermal Kit
18-101-61-	M00-0099	Valve List
18-101-62-	M00-0144	Painting Schedules
18-101-63-	P00-0009	Electrical Connection Diagram
18-101-64-	C00-0502	Terminal Points
18-101-65-	(CN 96729 (CN 96730	Spare Parts List) Index)
18-101-66-	P00-0301	Load on Foundation
18-101-67-	21200-0002	Eductor Sectional Assembly
18-101-68-	27000-0002	Flash and Drain Tank
18-101-69-	41115-0003	Enclosure Base Channel Arrangement
18-101-70-	CH97946	Turbine Annunciator Board Outline
18-101-71-	CH97947	Local Box Outline
18-101-72-	41763-0001	Main Oil Tank Outline
18-101-73-	41115-0002	Turbine and Oil Unit Enclosure Assembly (1/2)
18-101-74-	41115-0002	Turbine and Oil Unit Enclosure Assembly (2/2)
18-101-75-	61000-5011	Dwg. of Local Gauges (PI, TI, PS, TIS)
18-101-76-	41754-0001	Breakable Diaphragm Cover Assembly
18-101-77-	97000-2871	Motor Outline for Auxiliary Oil Pump
18-101-78-	97000-2873	Motor Outline for Emergency Oil Pump
18-101-79-	97000-2974	Motor Outline for Turning Gear
18-101-80-	S5438-3/3	Lifting Arrangement, Complete Unit (Complete Unit on Skid)
18-101-81-	92100-3011	Commissioning Schedule
18-101-82-	-----	Test Report of Filtering Type Oil Purifier (LT-370FS)
18-101-83-	3-A1-210A	Generator Data
18-101-84-	92200-4401	Wiring and Connection (TB-3 and Other)
18-101-85-	92200-4402	Wiring and Connection (TB-4)
18-101-86-	92200-4403	Wiring and Connection (TB-5 and TSB)
18-101-87-	CL66191	Local Box Connection Diagram
18-101-88-	61000-5012	Drawing of Thermoresistance
18-101-89-	61000-5013	Drawing of Level Switches

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18-101-90	61000-5012	VOID
18-101-91-	61000-5014	Drawing of Transducer
18-101-92-	61000-5015	VOID
18-101-93-	CZ01582	Turbine and Generator
18-101-94-	41115-0004	Gauge Boards
18-101-95-	74100-0001	Outline of Portable T/G and Oil Tank Foundation
18-101-96-	P00-0007	Turbine Drain System Layout
18-101-97-	61000-3021	Set Point List
18-101-98-	41811-0020	T/G Unit and Oil Unit Lifting Procedure
18-101-99-	92200-4101	Wiring Diagram
18-101-100-	41766-0021	Oil Tank Vent Fan & Vent Piping Assembly
18-101-101-	54-301	Inspection Record
18-101-102-	2700-0085	Strength Calculation of Flash & Drain Tank
18-101-103-	41111-0090	Exhaust Flange Terminal Point Arrangement
18-101-104-	41111-0023	Turbine Exhaust Flg.
18-101-105-	-	Turbine Generator Reduced Size Key Operational Drawing
18-101-106-	-	Test Report on 11,765 kVA Turbine Generator-Machine 3A1210A0101 - Equipment No. 18-1
18-101-107-	41111-0095	Inspection Hole Arrangement-Equipment No. 18-002
18-101-108-	41766-0051	Exhaust Chamber Drain Level Switch Piping
18-101-109-	Serial No. N-1815 202-0803	Flash and Drain Tank Facsimile of Name Plate
18-101-110-	-	List of Working Parts for 10 MW Turbine Generator
18-101-111-	MOO-0114	Performance Test Procedure
18-101-112-	-	7200 Series System Operation & Maintenance Manual Package System Model 7203209-01
18-101-113-	ANN-S-30030	Instructions Turbine Supervisory Instruments
18-101-114-	Book No. (IB-EF395)	Turbine Speed Monitor Manual
18-101-115-	Book No. (IB-EF321)	Automatic Voltage Regulator
18-101-116-	MOO-2033	Manual Voltage Regulator
18-101-117-	MOO-115	List of Consumable Parts
		Performance Test Report
18-102-1-	M-6859-1	15/10 Ton Bridge Crane
18-102-2-	M-6859-2	Electric Schematic 15/10 Ton Bridge Crane
18-102-3-	-----	Maintenance and Part Manual
18-102-4-	-----	Electrical Abbreviations
18-102-5-	-----	Electrical Bill of Material
18-103-1-	8709914	Flow Sheet for MAB 104 Module, Equipment #18-4, Dimensional
18-103-2-	8709922	MAB 104 Lube Oil Purifier Outline Drawing, Equipment #18-4, Dimensional
18-103-3-	8709927	Wiring Diagram for MAB 100 Series with Separate Duplex Pump (Sheets 1 and 2), Equipment #18-4, Dimensional

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18-104-1-	-	Operation, Maintenance Manual
19-101-1-	R-23203	Assembly Auto. Monoscour Filter
19-101-2-	R-23214	Schematic Wiring Diagram
19-101-3-	R-23216	Wiring Diagram
19-101-4-	T-30157	Layout and Detail
19-101-5-	0800	Bill of Material
19-101-6-	N-18056	Air Scour Blower Set Installation Monoscout Filters
19-101-7-	A-26812	Pressure Switch & Level Gauge for Mono Valve Filter Series Special Type 316 SS Construction
19-101-8-	N-10261-E	Roto - Scout & Strainer Assembly
19-101-9-	S-99652	Tabulated Assembly Drawing 2"-5" Calif. Series B Blower Vertical
19-101-10-	SUP 909102	Sutorbilt Weight Loaded Pressure Relief Valves
19-101-11-	A-Z-119	Intake Filter Silencer Series
19-101-12-	05-137-1-66	Bill of Material Instruction Sheet
19-101-13-	05-1001-8-72	Operating Instructions Monoscour Filter Equipment #19-4
19-102-1-	C-3859	Sahara Air Dryer
19-102-2-	C-3901	Wiring Diagram and Schematic
19-102-3-	-	Form U-1A Manufacturers' Data Report for Pressure Vessels No. 7165
19-102-4-	-	Form U-1A Manufacturers' Data Report for Pressure Vessels No. 7166
19-102-5-	-	Form U-1A Manufacturers' Data Report for Pressure Vessels No. 7229-1
19-102-6-	-	Form U-1A Manufacturers' Data Report for Pressure Vessels P. O. 1930
19-102-7-	-	Instruction Manual Sahara Air Dryer Model HL-100D12TX H-26127
19-104-1-	VCT 1000 F16	Assembly Filter, 4" Diameter, Dimension Drawing
19-106-1-	B-2410-1	Parts List
19-106-2-	B-2410-2	Calculations C-O-Two System
19-106-3-	B-2412-3	Nozzle and Adapter Details
19-106-4-	E-2408-1	Electrical Circuitry for Ansul Carbon Dioxide system
19-106-5-	-	Installation, Maintenance Manuals
20-101-1-	D-1-6348 1 of 3	66" Nom. Dia. Pressure Balanced Expansion Joint Assembly
20-101-2-	-----	Engineering Report
20-101-3-	D-1-6348 2 of 3	66" Nom. Dia. Pressure Balanced Expansion Joint Assembly Outline Drawing
20-101-4-	D-1-6348 3 of 3	66" Nom. Dia. Pressure Balanced Expansion Joint Assembly

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20-102-1-	7970268-1	Silencers: Ejector Disch/Separator
	Base	Outlet
20-102-2-	7970268-5	Silencers: Relief Valve
20-103-1-	-	900 Series Steam Calorimeter Operation and Main-
		tenance Manual
20-103-2-	-	Ellison Steam Calorimeter 900 Series Dimension
		Drawing
40-101-1-	6362	Dimensional Drawing System Control Panel
	1 of 2	
40-101-2-	6362	Material List System Control Panel
	2 of 2	
40-101-3-	6362	Wire Diagram Sht. #1, System Control Panel Left
	3	Hand Panel-Viewed from Rear
40-101-4-	6362	Wire Diagram Sht. #2, System Control Panel Middle
	4	Panel-Viewed from Rear
40-101-5-	6362	Wire Diagram Sht. #3, System Control Panel Right
	5	Hand Panel-Viewed from Rear
40-101-6-	6362	Wire Diagram Sht. #4, System Control Panel Upper
	6	Relay Panel
40-101-7-	6362	Wire Diagram Sht. #5, System Control Panel Lower
	7	Relay Panel Solenoid Wiring
40-101-8-	6362	Wire Diagram Sht. #6, System Control Panel,
	8	Annunciator Panel Wiring
40-101-9-	6362	Wire Diagram Sht. #7 System Control Panel, Ter-
	9	terminal Block Wiring
40-101-10-	-	Parts Manual & Operation & Maintenance Instruc-
		tions
40-102-1-	IN-FS 20805-1B	Panel Box "C" Dimensions
40-102-2-	TP4-2-D	Typical Tower Pac IV System Installation
40-102-3-	TP4-4-D	Tower Pac IV Wiring
40-102-4-	Bulletin 74	Tower Pac IV Operation Manual
40-103A-1	-----	Data Sheets for Control Valve Assemblies
40-103A-2-	VP 1681 1	G411A - JY - PHW - SA
	TAG: FV-102	
40-103A-3-	VP 1666 2	MXW1 & 3 - JY-PH-F-MJ
	TAG HV-901	
40-103A-4-	VP 1666 3	MXW1 & 3 - JY-PH-F-MJ
	TAG: LV-710A	
40-103A-5-	VP 1634 4	G411A-JY-FIL./REG.
	TAG: LV-710B/C	
40-103A-6-	VP 1496 5	G411B-50-3-JY-HP
	TAG: LV-703	
40-103A-7-	VP 1699 6	BL3-JY-PHW-TDW
	TAG: LV-713A/B	
40-103A-8-	VP 1634 7	G411A - JY - FIL./REG.
	TAG: LV-720	

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40-103A-9-	VP 1632 8 TAG: LV-722	G4A-JY-LSW-SOL-FR
40-103A-10-	Bulletin V-28a	Installation, Maintenance & Adjustment/Recommended Spare Lists for EG4 Valves
40-103B-1-	SM0115 PV-365	Valve Assembly
40-103B-2-	SM0266 PV-365	Valve and Actuator Assembly
40-103B-3-	SM0280 PV-365	Actuator Assembly
40-103B-4-	SM0115 HV-941	Valve Assembly
40-103B-5-	SM0266 HV-941	Valve and Actuator Assembly
40-103B-6-	SM0280 HV-941	Actuator Assembly
40-103B-7-	SM0115 HV-940	Valve Assembly
40-103B-8-	SM0266 HV-940	Valve and Actuator Assembly
40-103B-9-	SM0280 HV-940	Actuator Assembly
40-103B-10-	SM0115 PV-362	Valve Assembly
40-103B-11-	SM0266 PV-362	Valve and Actuator Assembly
40-103B-12-	SM0280 PV-362	Actuator Assembly
40-103B-13-	SM0250 PV-355C	Valve Assembly
40-103B-14-	SM0266 PV-355C	Valve and Actuator Assembly
40-103B-15-	SM0280 PV-355C	Actuator Assembly
40-103B-16-	SM0010 AV-950	Valve Assembly
40-103B-17-	SM0066 AV-950	Valve and Actuator Assembly
40-103B-18-	SM0280 AV-950	Actuator Assembly
40-103B-19-	SM0010 LV-730	Valve Assembly
40-103B-20-	SM0066 LV-730	Valve and Actuator Assembly
40-103B-21-	SM0280 LV-730	Actuator Assembly
40-103B-22-	SM0010 HV-924	Valve Assembly

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40-103B-23-	SM0066 HV-924	Valve and Actuator Assembly
40-103B-24-	SM0280 HV-924	Actuator Assembly
40-103B-25-	SM0010 HV-970	Valve Assembly
40-103B-26-	SM0357 HV-970	Actuator Assembly
40-103B-27-	SM0352 HV-970	Actuator Assembly
40-103B-28-	SM0225 HV-923	Valve Assembly
40-103B-29-	----- HV-923	Engineering Data
40-103B-30-	Page 6 HV-923	Accessories
40-103B-31-	SM0116 PV-364	Valve Assembly
40-103B-32-	Page 3 PV-364	Engineering Data
40-103B-33-	SM0013 PV-355A & 355B	Valve Assembly
40-103B-34-	----- PV-355A & 355B	Engineering Data
40-103B-35-	Page 6 PV-355A & 355B	Accessories
40-103B-36-	SMO 335 PV355A & 355B HV 923	Assembly Cylinder Actuated Unidrive
40-103B-37-	SMO 356	Assembly Cylinder Actuated Unidrive
40-103B-38-	Fig. 785 Page 4	Features of the Fig. 785 Actuator Unidrive Cylinder III & IV
40-103B-39-	Rep't No. 79/11/62981	Keystone Valve Corp. Hydrostatic Test Reports
40-103B-40-	-	Recommended Spare Parts for Keystone Valve
40-103B-41-	SM0248	Standard Stem Extension for Keystone Valve Tag No. HV-970
40-103B-42-	SM028	2" x 20" Fig. No's, 129 & 139 Elastomer Seated Valves with Gear Operator Tag No. HV-970
40-103B-43-	SM0010 SM0011	Installation & Maintenance Instruction Fig. 100 Butterfly Valve Standard Product with Elastomer Seat Tag No. HV-970
40-103B-44-	SM0115	Install. & Maintenance Instr. 2"-8" Figure 999 Butterfly Valve
40-103B-45-	Fig. 999	Install. & Maintenance Instr. 10'-12" Figure 999 Butterfly Valve
40-103B-46-	SM0010 SM0011	Install. & Maintenance Instr. Fig. 100 Butterfly Valve
40-103B-47-	- HV-923	Installation, Operation & Maintenance Manual SM0225, SM0335, SD74, DS305
40-103B-48-	- PV-355A&B	Installation, Operation & Maintenance Manual SM0013, SM0335

40-104-1-	DP-135-1	Series Manual Loading Stations
40-104-2-	DP110-1	Series Indicating Receiver
40-104-3-	DP40P-1 M/P	Series Recorder or Indicator
40-104-4-	GF-12232	Mansfield & Green Welded Diaphragm Pressure Seal Type 56
40-104-5-	PD WLTS-1 WPTS-1	Plain & Logging Type Threaded Straight Wells
40-104-6-	DP120-1	Series Pneumatic Consotrol Recorder
40-104-7-	DP130M-1	Series Controller
40-104-8-	DP14A-1	Model 14A Pneumatic Integrator
40-104-9-	DP556-1	Series Pneumatic Analog
40-104-10-	DP40P-1 M/P-A	Series Recorder or Indicator
40-104-11-	DP102-1	102 Series Pneumatic Consotrol Shelves
40-104-12-	DP102-1-A	102 Series Pneumatic Consotrol Shelves
40-104-13-	DP102-1-B	102 Series Pneumatic Consotrol Shelves
40-104-14-	DP102-1-C	102 Series Pneumatic Consotrol Shelves
40-104-15-	DP-021-120	2800 Series Magnetic Flow Tube Sizes 15 to 300MM (1/2 to 12 inch) (Line Metal Met Tube)
40-104-16-	DPE96S-1	E96S Magnetic Flow Transmitter Surface Mounted
40-104-17-	DP11GM-1	11GM Series Gauge Pressure Transmitter
40-104-18-	DP11AM-1	11AM Series Pneumatic Absolute Pres- sure Transmitter
40-104-19-	DP13DMP-1	13 DMP Series Differential Pressure Transmitter w/Remote Sealed Pressure Connections
40-104-20-	DP13-1	13 Series Pneumatic Differential Pressure Cell Transmitter
40-104-21-	DP13-1-A	13 Series Pneumatic Differential Pressure Cell Transmitter
40-104-22-	DP15-1	15 Series Pneumatic Differential Pressure Cell Transmitter
40-104-23-	PUB-202A-10M	Spare Parts Quotation
40-104-24-	-	Instructions, Installation, Operation, Mainte- nance. Pressure Recorder - Book 35
40-104-25-	PN 4200-048	Instruction Manual for Balsbaugh Series 1210. Electrodeless Conductivity Monitor Systems
40-104-26-	-	Installation, Operation, Maintenance - Book No. 1526
40-104-27-	-	Installation, Operation, Maintenance - Book No. 1532
40-104-28-	-	Installation, Operation, Maintenance - Book No. 1615
40-104-29-	-	Installation, Operation, Maintenance - Book No. 1825
40-104-30-	-	Installation, Operation, Maintenance - Book No. 1843

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40-104-31-	-	Installation, Operation, Maintenance - Book No. 1921
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10-1 Seal Water Separator

10-1.1 Purchase Data

Manufacturer:	Saracco Tank
Quantity:	1
Equipment Tag No.:	10-1
Spec. No.:	See Data Sheets
Requisition No:	MR 10-101
Purchase Order No.:	1016
Manufacturer's Contract No.:	3345

10-1.2 Spare Parts

<u>Part No.</u>	<u>Qty</u>
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10-2 Steam Separator

10-2.1 Purchase Data

Manufacturer:	Perry Equipment Corporation
Quantity:	1
Equipment Tag No.:	10-2
Spec. No.:	See Data Sheets
Requisition No.:	MR 10-102
Purchase Order No.:	1065
Manufacturer's Contract No.:	80-335

10-2.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	1/8 x 20 ID x 23 7/8 OD Gasket - spiral wound SS 304 and asbestos filler with 1/8" thick outer gage ring	1
	1/8 x 24 ID x 28 1/4 OD Gasket - same construction as above	1

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10-3 Instrument Air System Receiver

10-3.1 Purchase Data

Manufacturer:	Power Machine Co.
Quantity:	2
Equipment Tag No.:	10-3
Spec. No.:	See Data Sheets
Requisition No.:	MR 10-103
Purchase Order No.:	1079
Manufacturer's Contract No.	N/A

10.3.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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10-4 Sulfuric Acid Day Tank

10-4.1 Purchase Data

Manufacturer:	Phillips and Associates
Quantity:	1
Equipment Tag No.:	10-4
Spec. No.:	See Data Sheets
Requisition No.:	MR 10-104
Purchase Order No.:	1085
Manufacturer's Contract No.:	N/A

10-4.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	Flat ring type - 1/16 x 8 5/8 ID x 11 OD compressed asbestos gasket with lubricated faces	1

NOV 28 1960

11-1 Sanitary Water Storage Tank

11-1.1 Purchase Data

Manufacturer:	Duggins-Ryerson
Quantity:	1
Equip. Tag No.:	11-1
Requisition No.:	MR 80-101
Purchase Order No.:	1020
Manufacturer's Contract No.:	N/A

11-1.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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11-2 Sulfuric Acid Storage Tank

11-2.1 Purchase Data

Manufacturer:	McDonough Development
Quantity:	1
Equip. Tag No.:	11-2
Spec. No.:	See Data Sheets
Requisition No.:	MR 11-101
Purchase Order No.:	1039
Manufacturer's Contract No.:	N/A

11-2.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	1/8 thick x 20 ID x 25 3/8 OD flat ring type African blue asbestos gasket.	1
	1/16 thick African blue asbestos gaskets for the following 150# RF flanges:	
	1"	1
	2"	2
	3"	1

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11-3 Instrument Air System - Cooling Water Surge Tank

11-3.1 Purchase Data

Manufacturer:	Burlingame Engineering
Quantity:	1
Equip. Tag No.:	11-3
Spec. No.:	See Data Sheets
Requisition No.:	MR 11-102
Purchase Order No.:	1045
Manufacturer's Contract No.:	N/A

11-3.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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11-4 Oily Water Storage Tank

11-4.1 Purchase Data

Manufacturer:	Huddleston Equipment
Quantity:	1
Equip. Tag No.:	11-4
Spec. No.:	See Data Sheets
Requisition No.:	MR 11-103
Purchase Order No.:	1080
Manufacturer's Contract No.:	N/A

11-4.2 Spart Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	1/8 x 22 ID x 23 1/2 OD gasket (cork composition)	1

11-5 Corrosion Inhibitor Storage Tank

11-5.1 Purchase Data

Manufacturer:	McDonough Development
Quantity:	1
Equip. Tag No.:	11-5
Spec. No.:	See Data Sheets
Requisition No.:	MR 11-101
Purchase Order No.:	1039
Manufacturer's Contract No.:	N/A

11-5.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	Flat ring type 1/8 x 20 ID x 25 3/8 OD compressed asbestos gasket with lubricated faces	1

11-6 Lube Oil Storage Tank

11-6.1 Purchase Data

Manufacturer:	Huddleston Equipment
Quantity:	1
Equip. Tag No.:	11-6
Spec. No.:	See Data Sheets
Requisition No.:	MR 11-103
Purchase Order No.:	1080
Manufacturer's Contract No.:	N/A

11-6.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	1/8 thick x 22 ID x 23 1/2 OD gasket (cork composition)	1

12-1 Cooling Tower

12-1.1 Purchase Data

Manufacturer:	Lilie-Hoffmann Cooling Towers
Quantity:	1 - 2 cell tower
Equipment Tag No.:	12-1
Spec. No.:	S-12-002
Requisition No.:	MR 12-102
Purchase Order No.:	1009
Manufacturer's Contract No.:	516M-17353

12-1.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
Thomas Model 226 SN-SF	Drive shaft with stainless steel tubes and couplings	1
Amarillo Model 1008	Gear Box	1

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12-2 Main Condenser

12-2.1 Purchase Data

Manufacturer:	Graham Manufacturing Company
Quantity:	1
Equipment Tag No.	12-2
Spec. No.:	S-12-001
Requisition No.:	MR 12-101
Purchase Order No.:	1004
Manufacturer's Contract No.:	23964 M

12-2.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
3/4-20 Exp.	Tube Expander	1
B27416-112	Channel Gasket	2
B27416-112	Return Channel Gasket	2
B27416-112	Inlet Channel Cover Gasket	2
B27416-112	Return Channel Cover Gasket	2
C27416-13-3-28	Hotwell Gasket	2

12-3 Intercondenser

12-3.1 Purchase Data

Manufacturer:	Graham Manufacturing Co.
Quantity:	1
Equipment Tag No.:	12-3
Spec. No.:	S-12-001
Requisition No.:	MR 12-101
Purchase Order No.:	1004
Manufacturer's Contract No.:	23964 M

12-3.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
B27416-12	Inlet Channel Cover Gasket	2
B27416-12	Return Channel Cover Gasket	2
24GS	Hotwell Gaskets	2

12-4 Seal Water Cooler

12-4.1 Purchase Data

Manufacturer:	Graham Manufacturing Company
Quantity:	1
Equipment Tag No.:	12-4
Spec. No.:	S-01-001
Requisition No.	MR 12-103
Purchase Order No.:	1015
Manufacturer's Contract No.:	25478 PE

12-4.2 Spare Parts

<u>Part No.;</u>	<u>Description</u>	<u>Qty.</u>
	Ethylene-Propylene Gaskets (Includes 2-part epoxy cement)	5 Sets

12-5

Heat Exchangers for Instrument Air Compressor
Two identical heat exchangers noted as "A" and "B"

12-5.1

Purchase Data

Manufacturer:	Graham Manufacturing Company, Inc.
Quantity:	2
Equipment Tag No.:	12-5A & B
Spec. No.:	See Data Sheets
Requisition No.:	Mr-12-104
Purchase Order No.:	1053
Manufacturer's Contract No.:	27682 PE

12-5.2

Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
0131154	Gaskets (plates)	6
0131160	Gasket Adhesive	1 Set

14-1 Cooling Water Circulation Pumps

Two identical pumps notated as "A" and "B"

14-1.1 Purchase Data

Manufacturer:	Byron Jackson Pump
Quantity:	2
Equipment Tag No.:	14-1A & B
Spec. No.:	S-14-001
Requisition No.:	MR 14-101
Purchase Order No.:	1012
Manufacturer's Contract No.:	474-755-5

14-1.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	Mechanical Seal	2
	Stainless Steel Impeller	1
#103	Bottom Bearing 118933 FA	1
#244	Sand Cap 118170 FA	1
#950	Thrust Collar 637499 DB	1
#256	Split Ring 629788 CB	1
#397	Top Case Bearing 118006 FA	1
#205	Case Wear Ring 118172 DB	1
#213	Impeller Wear Ring 844395 DB	1
#256	Split Ring 750692 EH	1

14-2 Auxiliary Cooling Water Pump

14-2.1 Purchase Data

Manufacturer:	Peerless Pump
Quantity:	1
Equipment Tag No.:	14-2
Spec. No.:	S-14-002
Requisition No.:	MR 14-103
Purchase Order No.:	1021
Manufacturer's Contract No.:	41446 EV SN 237290

14-2.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
2604044-179	Top Ball Bearing	1
2604045-179	Top Ball Bearing	2
2604045-179	Std. Ball Bearing	1
2604044-179	Suction Ball Bearing	2
2604045-179	Suction Ball Bearing	1
2604043-179	Packing Container Bearing	1
416821-53FK	Front Motor Bearing	1
416821-53FM	Back Motor Bearing	1

14-4 Condensate Pumps
Two identical pumps noted as "A" and "B"

14-4.1 Purchase Data

Manufacturer:	Worthington Pump Corporation
Quantity:	2
Equipment Tag No.:	14-4A & B
Spec. No.	S-14-003
Requisition No.:	MR 14-102
Purchase Order No.:	1014
Manufacturer's Contract No.:	698843

14-4.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
959688-05	Shaft Assembly	1
390099-01	Casing Gasket	1
23617-30	Seal Cage	1
po-4644	Packing	1
po-4046	Lip Seal (Line Bearing)	1
40748	Line Bearing	1
22407	Thrust Bearing	1
390066	Bearing Cover Gasket	1
po-4049	Lip Seal (Thrust Bearing)	1
po-4001	Impeller Nut	1
390085	Lockwasher Gasket	1
390084	Impeller Nut Lockwasher	1
960191	Wear Ring (Cover Ring)	1
8B1	Mech. Seal Crane	1
959691-05	Shaft Sleeve	1

14-5 Seal Water Pump

14-5.1 Purchase Data

Manufacturer:	Goulds Pumps
Quantity:	1
Equipment Tag No.:	14-5
Spec. No.:	See Data Sheets
Requisition No.:	MR 14-104
Purchase Order No.:	1011
Manufacturer's Contract No.:	N/A

14-5.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
R100-595	Impeller	1
8055-30930	Ball Bearing	1
R104-733	Shaft	1
73705X	Shaft Sleeve	1
8601-0009	Bearing Lock Nut	1
8050-30961	Ball Bearing	1
8910-0009	Bearing Lockwasher	1
086829	Mechanical Seal	1
70721	O-Ring Impeller	1
70721	O-Ring	1

14-6 Waste Water Sump Pump

14-6.1 Purchase Data

Manufacturer:	Durco
Quantity:	1
Equipment Tag No.:	14-6
Spec. No.:	See Data Sheets
Requisition No.:	MR 14-108
Purchase Order No.:	1046
Manufacturer's Contract No.:	N/A

14-6.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
105	Composite Shaft	1
104	Impeller gasket for: Standard and self-priming pumps	1
107	Read Cover gasket for: Standard and self-priming pumps	1
112	Seal Cage	1
113	Molded Ring Packing (TFE)	1
118	I. B. Oil Seal	1
129	O. B. Oil Seal	1
120	I. B. Bearing	1
121	O. B. Bearing	1
126	Bearing Cover Gasket Kit	1
127	Bearing Shim Kit	1

14-7 Cooling Water Makeup Pump

14-7.1 Purchase Data

Manufacturer:	Worthington Pump
Quantity:	1
Equipment Tag No.:	14-7
Spec. No.:	S-14-004
Requisition No.:	MR 14-106
Purchase Order No.:	1014
Manufacturer's Contract No.:	73-9006

14-7.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	Bowl Shaft (316 SSTL)	1
	Line Shaft (316 SSTL)	1
	Ball Bearings	1 set
	Set of Packing	1
	Line Shaft Sleeve	1
	Impeller	1
	Stuffing Box Bearing	1

14-8 Cooling Water Makeup Pump

14.8.1 Purchase Data

Manufacturer:	Worthington Pump
Quantity:	1
Equipment Tag No.:	14-8
Spec. No.:	S-14-004
Requisition No.:	MR 14-106
Purchase Order No.:	1014
Manufacturer's Contract No.:	73-9006

14.8.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	Bowl Shaft	1
	Line Shaft (316 SSTL)	1
	Ball Bearings	1 set
	Set of Packing	1
	Line Shaft Sleeve	1
	Impeller	1
	Stuffing Box Bearing	1

14-9 Acid Metering Pump

14-9.1 Purchase Data

Manufacturer:	LMH, Inc., Hills-McCanna
Quantity:	1
Equipment Tag No.:	14-9
Spec. No.:	See Data Sheets
Requisition No.:	MR 14-109
Purchase Order No.:	1056
Manufacturer's Contract No.:	HM-1544

14-9.2 Spare Parts

<u>Ref. No.</u>	<u>Description</u>	<u>Qty.</u>
3	Ball	2
4	O-Ring	2
6	Diatube-Process	1
7	O-Ring	2
9	Seat	2
10	O-Ring	2
12	O-Ring	1
13	O-Ring	1
15	O-Ring	2
15	O-Ring	2
19	O-Ring	1
25	O-Ring	1
26	Diatube-Hydraulic	1

14-10 Inibitor Metering Pump

14-10.1 Purchase Data

Manufacturer:	LHM, Inc. - Hills McCanna
Quantity:	1
Equipment Tag No.	14-10
Spec. No.:	See Data Sheets
Requisition No.:	MR 14-109
Purchase Order:	1056
Manufacturer's Contract No.:	HM 1544

14-10.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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Parts listed for 14-9 Acid
Metering Pump are also used
for this pump.

14-11 Jockey Pump

14-11.1 Purchase Data

Manufacturer:	Worthington Pump
Quantity:	1
Equipment Tag No.:	14-11
Spec. No.:	S-14-005
Requisition No.:	MR 14-105
Purchase Order No.:	1048
Manufacturer's Contract No.:	N/A

14-11.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
960399-01	17% Chrome Hardened Shaft Sleeve for Jockey Pump	1
959644-05	316 Stainless Steel Shaft for Jockey Pump	1

14-12

Fire Pump

14-12.1

Purchase Data

Manufacturer:	Worthington Pump
Quantity:	1
Equipment Tag No.:	14-2
Spec. No.:	S-14-005
Requisition No.:	MR 14-105
Purchase Order No.:	1048
Manufacturer's Contract No.:	H2372

14-12.2

Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
52781-30	17% Chrome Hardened Shaft Sleeve for Fire Pump	2
953364	316 Stainless Steel Shaft for Fire Pump	1

14-13 Silt Pocket Pump

14-13.1 Purchase Data

Manufacturer:	Durco
Quantity:	1
Equipment Tag No.:	14-13
Spec. No.:	See Data Sheets
Requisition No.:	MR 14-110
Purchase Order No.:	1076
Manufacturer's Contract No.:	N/A

14-13.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
Y33752A	#118 I. B. Oil Seal, Gp. I	1
Y33753A	#129 O. B. Oil Seal, Gp. I	1
Y32122A	#120 I. B. Bearing, Gp. I	1
Y23418A	#121 O. B. Bearing, Gp. I	1
Y19847A	#126 Bearing Cover Gasket Kit, Gp. I	1
BY2333/AA	#105 Shaft, Gp. I	1
SA3211AA00	#104 Impeller Gasket, Gp. I	1
Y22774D	#107 Rear Cover, 6"	1
AY37684B	#112 Seal Cage, Gp. I	2
811GRI	#113 Standard Packing, Gp. I	1

14-14 Backwash Sump Pump

14-14.1 Purchase Data

Manufacturer:	Durco
Quantity:	1
Equipment Tag No.:	14-14
Spec. No.:	See Data Sheets
Requisition No.:	MR 14-108
Purchase Order No.:	1046
Manufacturer's Contract No.:	N/A

14-14.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
105	Composite Shaft	1
104	Impeller Gasket	1
107	Rear Cover Gasket	1
112	Seal Cage	1
113	Molded Ring Packing (TFE)	1
118	I. B. Oil Seal	1
129	O. B. Oil Seal	1
120	I. B. Bearing	1
121	O. B. Bearing	1
126	Bearing Cover Gasket Kit	1
127	Bearing Shim Kit	1

14-15 Sanitary Service Pump

14-15.1 Purchase Data

Manufacturer:	Duggins-Ryerson
Quantity:	1
Equipment Tag No.:	14-15
Spec. No.:	N/A
Requisition No.:	MR-80-101
Purchase Order No.:	1020
Manufacturer's Contract No.:	N/A

14-15.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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14-16

Air Compressor Cooling Water Pump

Two identical pumps noted as "A" and "B"

14-16.1

Purchase Data

Manufacturer:	Eco Pump Corporation
Quantity:	2
Equipment Tag No.:	14-16A & B
Spec. No.:	See Data Sheets
Requisition No.:	MR 14-107
Purchase Order No.:	1066
Manufacturer's Contract No.:	N/A

14-16.2

Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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15-1 First Stage Ejector

15-1.1 Purchase Data

Manufacturer:	Graham Manufacturing Company
Quantity:	1
Equipment Tag No.:	15-1
Spec. No.:	S-12-001
Requisition No.:	MR 12-101
Purchase Order No.:	1004
Manufacturer's Contract No.:	23964M

15-1.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
N-20474	Steam Nozzle	1
C27416-13-4-44	Air Chamber Gasket	2

15-2 Second Stage Ejector

15-2.1 Purchase Data

Manufacturer:	Graham Manufacturing Company
Quantity:	1
Equipment Tag No.:	15-2
Spec. No.:	S-12-001
Requisition No.:	MR 12-101
Purchase Order No.:	1004
Manufacturer's Contract No.:	23964M

15-2.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
N-20473	Steam Nozzle	1
A11804-6	Air Chamber Gasket	2

15-3 Vacuum Compressor and Motor

Two identical compressors and motors noted as "A" and "B"

15-3.1 Purchase Data

Manufacturer:	Nash Engineering Company
Quantity:	1
Equipment Tag No.:	15-3A & B
Spec. No.:	S-16-001
Requisition Nos.:	MR 16-101 & MR 17-108
Purchase Order Nos.:	1005 & 1007
Manufacturer's Contract No.:	U 39520

15-3.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
119	Bearing (DE)	1
120	Bearing (IE)	1
	Gasket (Set)	1
118-1	O-Ring	1

15-4 Gland Seal Ejector

15-4.1 Purchase Data

Manufacturer:	MHI
Quantity:	1
Equipment Tag No.:	15-4
Spec. No.:	S-18-001
Requisition No.:	MR 18-101
Purchase Order No.:	1001
Manufacturer's Contract No.:	30357

15-4.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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(Note: See Section 18-2 for necessary Spare Parts for
 the Gland Seal Ejector)

16-1 Instrument Air Compressors

Two identical compressors noted as "A" and "B"

16-1.1 Purchase Data

Manufacturer:	Joy Manufacturing Company
Quantity:	2
Equipment Tag No.:	16-1A & B
Spec. No.:	See Data Sheets
Requisition No.:	MR 16-102
Purchase Order No.:	1024
Manufacturer's Contract No.:	N/A

16-1.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
909120-5150	Set of V-Belts	2
1607380	Packing-Carbon	4
201115	Gasket-Head	2
201189	Spring-Carter	4
219743	Sleeve	16
220242A	Spring	12
A237023	Gasket-Compound	2
242508	Shoe	12
514006-234	Valve Assembly-Inlet	1
514006-236	Valve Assembly-Discharge	1
527344	Scraper Ring Assembly	1
70160-1488	Element-Oil Filter (Kit)	2
1247788	Bushing Wrist Pin	1
1602917	Spring	8
1603836	Spring	24
1760260-0002	Bill Ring	2
1608788-0009	Piston Ring	4
1247311	Gland Packing (Set)	1

17-1 Main Transformer

17-1.1 Purchase Data

Manufacturer:	General Electric Company
Quantity:	1
Equipment Tag No.:	17-1
Spec. No.:	S-17-001
Requisition No.:	MR 17-101
Purchase Order No.	1010
Manufacturer's Contract No.:	474-88553

17-1.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
7B532BB	Bushing for HV Winding	1
1B816BB	Bushing for LV Winding	1
7B522BB	Neutral Bushing for HV Winding	1
112A7299MBP23	Fan Motor	1
667L808EPG3	Gasket	1
89H56	Bushing Current Transformer	1
12HEA61A294	Lockout Relay	1
206A8983G1	Diode Assembly	1

17-2 4 kV Switchgear

17-2.1 Purchase Data

Manufacturer:	Warco Control Centres
Quantity:	1 Lot
Equipment Tag No.:	17-2
Spec. No.:	S-17-102
Requisition No.:	MR 17-102
Purchase Order No.:	1008
Manufacturer's Contract No.:	6337

17-2.2.1 Spare Parts 50DHP 250 2000A (Breaker)

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	Arc Chute Assembly	1
	Motor for Charging	1
	Closing Coil (125VDC)	1
	Trip Coil (125VDC)	1
	Secondary Test Coupler	1
	Cabinets	1
	Tools	1 Lot

17-2.2.2 Spare Parts 4160V Starter Assembly

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	Heaters for ea. starter size	15
	Complete Drawout Motor Starter	1
	Set of 3 Power Fuses for ea. Size Starter Unit	15
	Control Fuses for ea. Starter Unit	14
	Secondary Control Fuse for ea. Starter	7
	Starter H. V. Control Stabs	1 Set
	Starter H. V. Contact Fingers	1 Set

17-2.2.2

Spare Parts 4160V Starter Assembly (Continued)

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	Starter H. V. Control Contact Fingers	1 Set
	Auxiliary Contacts	1 Set
	Control Transformer (600VA)	1
	Start or Stop Unit	2
	Indicating Lights	2
	Starter H. V. Control Stabs	1 Set

17-3 Auxiliary Transformer

17-3.1 Purchase Data

Manufacturer:	General Electric
Quantity:	1
Equipment Tag No.:	17-3
Spec. No.:	S-17-105
Requisition No.:	MR-17-105
Purchase Order No.:	1013
Manufacturer's Contract No.:	474-88556

17-3.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	High Voltage Bushing and Gasket	1
	Low Voltage Bushing and Gasket	1
	Complete Set of Gaskets for Transformer	1

17-4

3.45 KV Reclosers

17-4.1

Purchase Data

Manufacturer:	McGraw Edison
Quantity:	3
Equipment Tag No.:	17-4
Spec. No.:	S-17-104
Requisition No.:	MR-17-104, MR-17-109
Purchase Order No.:	1018, 1027
Manufacturer's Contract No.:	N/A

17-4.1

Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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17-5 480 Volt Motor Control Center

17-5.1 Purchase Data

Manufacturer:	Square D Company
Quantity:	1
Equipment Tag No.:	17-5
Spec. No.:::	S-17-106
Requisition No.:	MR-17-106
Purchase Order No.	1017
Manufacturer's Contract No.:	49-64688

17-5.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
8998-EC401	Size 1 Starter	1
8998-ED401	Size 2 Starter	1
8998-BW413	Dual Circuit Breaker Unit with One 50A and One 100A Circuit Breaker	1
31041-400-42	Coil, Size 1	1
31063-409-38	Coil, Size 2	1
31091-400-38	Coil, Size 4	1
	Coil & Transformer Kit, Size 6	1
9070-E01	Control Power Transformer 480-120 Volt, Size 1	1
9070-E02	Control Power Transformer 480-120 Volt, Size 2	1
9070-E0A	Control Power Transformer 480-120 Volt, Size 4	1
9001-KRIR	Pushbutton	1
9001-KAI	Contact	1
9001-KSIIB	Selector Switch	1
9001-KAI	Contact	1

17-5.2

Spare Parts (Continued)

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
9001-KPI	Light	1
	Thermal Units	26 Sets
9998-SL3	Contact Kit, Size 1	1
9998-SL4	Contact Kit, Size 2	1
9998-SL9	Contact Kit, Size 4	1
9999-SX6	Aux. Interlock Kit	1
9999-SX7	Aux. Interlock Kit	1
9080-P3	Terminal Block (3 term)	1
9080-P4	Terminal Block (4 term)	1
25501-01005	6V Lamp	10

17-6 Station Battery Charger (125-VDC System)

17-6.1 Purchase Data

Manufacturer:	Nife, Inc.
Quantity:	1
Equipment Tag No.:	17-6
Spec. No.:	S-17-107
Requisition No.:	MR-17-107
Purchase Order No.:	1026
Manufacturer's Contract No.:	C 62116

17-6.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
3100477	w/conn Battery	2
8000310042702	Inter-Cell Connector	4
8000310044501	Vent Cap	4
8012641086603	Potassium Hydroxide	5 Gal.
	A. C. ON Lamps	2

17-7

Control Panel

17-7.1

Purchase Data

Manufacturer:	Warco Control Centres
Quantity:	1
Equipment Tag No.:	17-7
Spec. No.:	S-40-101
Requisition No.:	MR-40-101
Purchase Order No.:	1060
Manufacturer's Contract No.:	6362

17-7.2

Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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18-1 Generator

18-1.1 Purchase Data

Manufacturer:	Mitsubishi Electric Corp.
Quantity:	1
Equipment Tag No.:	18-1
Spec. No.:	S-18-001
Requisition No.:	MR-18-101
Purchase Order No.:	1001
Manufacturer's Contract No.:	3-A1-210A

18-1.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
C1099645-1	Generator Bearing	2
CN99645-10	Shield Ball Bearing for Make-up Fan Motor	1
CN99645-11	Shield Ball Bearing for Make-up Fan Motor	1
CN99645-9	Activated Charcoal for Air Filter	1 Bag
CN99645-4	Corrosion Protective Plate CPZ-IF	10
CN99645-6	Space Heater for Generator and Exciter	1
CN99645-5	Silicon Diode for Exciter SR-100DM-32	4
CN-99645-7	Fuse for Silicon Diode	2
CN99645-12	Gasket for Air Cooler	1
CN99645-13	Gasket for Air Cooler	1
CN99645-14	Bushing for Finned Tube	12
CN99645-3	Finned Tubes	12
	M-G Set for AVR Test	1
CN96729-117	Printed Circuit Board L-EXL01	1
CN96729-120	Printed Circuit Board C-PWM	1
CN96729-119	Printed Circuit Board L-PFD	1

Spare Parts (Continued)

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
CN96729-115	Printed Circuit Board L-PMH3	1
CN96729-116	Printed Circuit Board L-AFGU	1
CN96729-118	Printed Circuit Board L-SFD	1
CN96729-121	Printed Circuit Board U-PFB	1
CN96729-109	Lamp Base for Signal Lamp Type M	10
CN96729-108	Signal Lamp Type M UPM-125RK	4
CN96729-101	Auxiliary Relay SRD-40	3
CN96729-102	Auxiliary Relay SRD-80	1
CN96729-103	Latch Relay SRL-D-100	1
CN96729-104	Timer SRTD-N	1
CN96729-114	Lamp TE-12	10
CN96729-112	Lens for Signal Lamp Type M UPM-1-White	3
CN96729-113	Lens for Signal Lamp Type M UPM-1-Orange	3
CN96729-111	Lens for Signal Lamp Type M UPM-1-Green	3
CN96729-110	Lens for Signal Lamp Type M UPM-1-Red	3
CN96729-107	Fuse Link BLA003(C-3) 3A	5
CN96729-124	Alarm Fuse (P-405)	6
CN96729-123	Fuse (BLC012-1)	6
CN96729-122	Thyristors (CR-20F-16)	3

18-2

Turbine

18-2.1

Purchase Data

Manufacturer:	Mitsubishi Heavy Industries
Quantity:	1
Equipment Tag No.:	18-2
Spec. No.:	S-18-101
Requisition No.	MR 18-101
Purchase Order No.:	1001
Manufacturer's Contract No.:	30357

18-2.2

Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	Exhaust Casing Atmospheric Relief Diaphragm	1
	Spare Parts for Governor Valve	1 Box
N-26-10-2488-16-7	Pin and Nozzle	1
N-26-G10-1487-55-1	"O" Ring for Governor Valve	1
	Main Oil Pump Spare Metal	1
	Steel Bearings	2
41761-0005CD	Split Bearings	1
TS53-108Q8-4	"O" Rings for Oil Cooler	1 Set
TS53-108Q8-3	"O" Rings for Oil Cooler	1
41761-0002A-5	Shaft	1
	Coupling for Oil Pump	2
	Pressure Gauges 0-100 psig	2
	Pressure Gauges 0-145 psig	1
	Thermometers	2

18-3 Bridge Crane

18-3.1 Purchase Data

Manufacturer:	Whiting/Walter Dankas & Co.
Quantity:	1
Equipment Tag No.:	18-3
Spec. No.:	S-18-102
Requisition No.:	MR-18-102
Purchase Order No.:	1002
Manufacturer's Contract No.:	N/A

18-3.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	Hoist Cable (for 15-ton Hoist)	1
	Hoist Cable (for 10-ton Hoist)	1
	2-Speed Solid State Acceleration Control	1
	8-Button Station	1
	12-3/7" Diameter Sheaves with Bearings	3
	Brake Disc	4

18-4

Centrifuge

18-4.1

Purchase Data

Manufacturer:	DeLaval
Quantity:	1
Equipment Tag No.:	18-4
Spec. No.:	S-18-103
Requisition No.:	MR-18-103
Purchase Order No.:	1003
Manufacturer's Contract No.:	N/A

18-4.2

Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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18-5 Chlorination Equipment

18-5.1 Purchase Data

Manufacturer:	W. N. Boyes & Co.
Quantity:	1
Equipment Tag No.:	18-5
Spec. No.:	S-18-104
Requisition No.:	MR-18-104
Purchase Order No.:	1004
Manufacturer's Contract No.:	N/A

18-5.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
OV-11-006	O-Ring	4
G-100-3	Meter Gasket	4
OV-11-010	O-Ring	2
OV-11-00	O-Ring	2
F-100	Fitting	3
OV-11-112	O-Ring	3
OV-11-212	O-Ring	1
OV-11-011	O-Ring	1
A-108-8	Flow Meter Assembly	1
W-101	Inlet Filter Screen	1
OV-11-012	O-Ring	5
OV-11-028	O-Ring	1
D-106	Diaphragm Set	1
U-162-1	Flow Tube	1
U-184	Filter Stop	1
W-110	Valve Seat	1

18-6 Sulfuric Acid Equipment

18-6.1 Purchase Data

Supplier:	Buck Sales
Quantity:	1
Equipment Tag No.:	18-6
Spec. No.:	See Data Sheets
Requisition No.:	MR-18-105
Purchase Order No.:	1005
Manufacturer's Contract No.:	N/A

18-6.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
22-328	Viton O-Rings	2
22-309	Teflon O-Rings	2

18-7 Corrosion Inhibitor Metering Pump Strainer

18-7.1 Purchase Data

Supplier:	Buck Sales
Quantity:	1
Equipment Tag No.:	18-7
Spec. No.:	See Data Sheets
Requisition No.:	MR-18-105
Purchase Order No.:	1005
Manufacturer's Contract No.:	N/A

18-7.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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18-8

Hand Chain Hoist

18-8.1

Purchase Data

Supplier:	Walter Dankas
Quantity:	1
Equipment Tag No.:	18-8
Spec. No.:	See Data Sheets
Requisition No.:	MR-18-106
Purchase Order No.:	1103
Manufacturer's Contract No.:	N/A
Capacity:	1 1/2 Ton

18-8.2

Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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18-9

Jib Crane

18-9.1

Purchase Data

Manufacturer:	Chester Mfg. Co.
Quantity:	1
Equipment Tag No.:	18-9
Spec. No.:	See Data Sheets
Requisition No.:	MR-18-106
Purchase Order No.:	1103
Manufacturer's Contract No.:	N/A

18-9.2

Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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19-1 Instrument Air Driers
Two identical driers noted as "A" and "B"

19-1.1 Purchase Data

Manufacturer:	Henderson Engineering Co.
Quantity:	1
Equipment Tag No.:	19-1A & B
Spec. No.:	See Data Sheets
Requisition No.:	MR-19-102
Purchase Order No.:	1047
Manufacturer's Contract No.:	N/A

19.1.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	1" Desiccant Retainer	1
	1" 3-Way Valve	1
	1/2" Relief Valve	1
	1/4" Check Valve	1
	Pilot Air Filter	1
	6 RPM Timer Motor	1
	Micro Switch	1
	1/8" 3-Way Solenoid Valve	1

19-3 Sand Filter - Sanitary Water

19-3.1 Purchase Data

Manufacturer:	Duggins/Ryerson
Quantity:	1
Equipment Tag No.:	19-3
Spec. No.:	S-80-001
Requisition No.:	MR 80-101
Purchase Order No.:	1020
Manufacturer's Contract No.:	N/A

19-3.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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(Spare Sand Filters to be furnished with Buildings)

19-4 Automatic Sand Filter for Silt Pocket

19-4.1 Purchase Data

Manufacturer:	Ecodyne (Graver)
Quantity:	1
Equipment Tag No.:	19-4
Spec. No.:	See Data Sheets
Requisition No:	MR 19-101
Purchase Order No.:	1031
Manufacturer' Contract No.:	N/A

19-4.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	Roto-Scour Assembly per Dwg. N-10261-D, White Plastic	20
	Cam Timer, ATC, 115V, 60 Hz. with 5 Switches and Cams	1
	Magnetic Control Relay, Struthers-Dunn, DPDT Contacts 115V, 60 Hz.	1
	For 4", 6" and 3" Keystone Butter fly Valves:	
	BUNA-N Seat for 3"	1
	BUNA-N Seat for 4"	1
	BUNA-N Seat for 6"	1
	Actuator Spare Parts Kit	2
	Parts for Sutorbilt Air Blower:	
	Main Bearings	4
	Main Seals	4
	Drive Seal	1
	Timing Gears	1 Pair
	Check Valve, Prince 3"	1
	For Fisher & Porter Rotameter:	
	Tube	1

19-5

Instrument Inlet Air Absorption Filters

Two identical filters noted as "A" and "B"

19-5.1

Purchase Data

Manufacturer:	Purafil, Inc.
Quantity:	2
Equipment Tag No.:	19-5A & B
Spec. No.:	See Data Sheets
Requisition No.:	MR-19-103
Purchase Order No.	1086
Manufacturer's Contract No.:	N/A

19-5.2

Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
2P	Pleated Filter 2"	2
12M-PM-12D	Purafil Modules	4
12F-FF-90	Rigid Frame Particulate Filter	2

19-6

Instrument Air After Filters

Two identical filters noted as "A" and "B"

19-6.1

Purchase Data

Manufacturer:	Pall-Trinity-Micro
Quantity:	2
Equipment Tag No.:	19-6A & B
Spec. No.:	See Data Sheets
Requisition No.:	MR-19-104
Purchase Order No.:	1088
Manufacturer's Contract No.:	N/A

19-6.2

Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
MCS-1001EC	Spare Cartridges w/Gaskets	4
	BUNA-N Housing Seals	8

19-7 Sulfuric Acid Tank Vent Air Dryer

19-7.1 Purchase Data

Manufacturer:	Protectoseal
Quantity:	1
Equipment Tag No.:	19-7
Spec. No.:	See Data Sheets
Requisition No.:	MR-19-105
Purchase Order No.:	1098
Manufacturer's Contract No.:	N/A

19-7.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
782-18-101	BUNA-N O-Rings	2

20-1 Ejector/Separator Silencer

20-1.1 Purchase Data

Manufacturer:	Fluid Kinetics
Quantity:	1
Equipment Tag No.:	20-1
Spec. No.:	See Data Sheets
Requisition No.:	MR-20-102
Purchase Order No.:	1038
Manufacturer's Contract No.:	N/A

20-1.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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20-3 Turbine Exhaust Pipe Section

20-3.1 Purchase Data

Manufacturer:	Pathway Bellows, Inc.
Quantity:	1
Equipment Tag No.:	20-3
Spec. No.:	See Data Sheets
Requisition No.:	MR-20-101
Purchase Order No.:	1032
Manufacturer's Contract No.:	N/A

20-3.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	1/8" thick x 66 ID - #1000 Wire Inserted Compressed Asbestos Gasket	2

20-4 Relief Valve Silencer
Three silencers noted "A", "B", and "C"

20-4.1 Purchase Data

Manufacturer:	Fluid Kinetics
Quantity:	3
Equipment Tag No.:	20-4A, B and C
Spec. No.:	See Data Sheets
Requisition No.:	MR-20-102
Purchase Order No.:	1038
Manufacturer's Contract No.:	N/A

20-4.2 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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EXPLANATION OF INSTRUMENT SPARE PARTS SECTION

In this Instrument Spare Parts Section, each Section Number (i.e., 40-1, 40-2, etc.) is related to a Requisition Number (i.e., MR-40-101, MR-40-102, etc.) under which Instrumentation was purchased. Spare Parts for this Instrumentation will also be purchased under the same Requisition Number. Suppliers of Instrumentation have made Spare Parts recommendations and those recommendations, when available, are the Spare Parts Lists included in this Section. (The Section Numbers comprise 40-1 thru 40-23, respectively).

40-1 Requisition No.: MR-40-102

40-1.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
P6001	Fuses, 10 Amp. (box of 5)	1 Lot
P6002	Fuses, 1/2 Amp. (box of 5)	1 Lot
P6421	Conductivity Electrode (0-5000 range)	1
P6422	pH Electrode	1
C0033	Testing Kit (complete hardness test)	1 Lot
C0037	Testing Kit (MLN Nalcometer with case for dissolved solids testing)	1 Lot
C0125	Testing Kit (photo-tester Model C)	1 Lot
C0074	Testing Kit (pH Disc Comparator Unit)	1 Lot
P1006	Chlorine Discs 330D	1 Lot

40-2 Requisition No.: MR-40-103A

40-2.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	1" G411 Repair Kit	2
	1/2" G411 Repair Kit	1
	3" G411 Repair Kit	2
	3" High Performance B.F. Seat Kit	1
	4" High Performance B.F. Seat Kit	1
	6" High Performance B.F. Seat Liner	1
	B60 Diaphragm	1
	C60 Diaphragm	2
	Positioner (P-32)	1

40-3 Requisition No.: MR-40-103B

40-3.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
<u>VALVE (HV 924) 4" FIG. 100</u>		
414-206-040-100-003	EPDM Seat	1 ea.
230-928-040-100-001	Stem Packing	1 ea.
113-935-040-100-001	Disc Screws O-Rings	2 ea.
<u>VALVE (LV 730) 3" FIG. 100</u>		
414-206-030-100-003	EPDM Seat	1 ea.
230-928-020-100-001	Stem Packing	1 ea.
113-935-020-100-001	Disc Screws	2 ea.
<u>VALVE (AV 950) 2½" FIG. 100</u>		
414-206-025-100-003	EPDM Seat	1 ea.
<u>VALVE (PV 355C)</u>		
414-206-060-999-003	EPDM Seat	1 ea.
230-928-080-100-001	Stem Packing	1 ea.
<u>VALVE (PV 362) 3" FIG. 999</u>		
414-206-030-999-003	EPDM Seat	1 ea.
<u>VALVE (HV 940) 6" FIG. 999</u>		
414-206-020-999-003	EPDM Seat	1 ea.
<u>DIAPHRAGM ACTUATORS (for all diaphragms)</u>		
121-228-020-723-101	Diaphragm	3 ea.
<u>VALVE (HV 923) 24" FIG. 100</u>		
414-206-240-104-000	EPDM Seat	1 ea.
230-927-329-730-000	Upper Stem O-Ring	1 ea.
147-935-240-100-034	Body Plug Kit	1 ea.

40-3.1 Spare Parts (Continued)

VALVE (PV 355A & PV 355B) 20" FIG. 122

414-206-200-100-003 EPDM Seat	2 ea.
230-928-200-100-001 Stem Packing	2 ea.
113-935-200-100-001 Disc Screws	6 ea.

VALVE (PV 364) 10" FIG. 999

414-206-100-999-003 EPDM Seat	1 ea.
230-928-120-100-001 Stem Packing	1 ea.

VALVE (PV 365) 6" FIG. 999

414-206-060-999-003 EPDM Seat	1 ea.
230-928-080-100-001 Stem Packing	1 ea.

VALVE (HV 970) 8" FIG. 100

414-206-080-100-003 EPDM Seat	1 ea.
230-928-080-100-001 Stem Packing	1 ea.
113-935-080-100-001 Disc Screws & O-Rings	2 ea.

B6301YY	Pin	2
C0100EM	Gasket	2
C0112AE	Strainer Assembly	1
C0123AS	O-Ring	4
C0123KK	Steel Ball	1
C0125AT	Screw Assembly	2
C0125BB	O-Ring	2
C0126EF	Roller	2
C0127CM	O-Ring	5
C0130UH	Manifold Valve	1
C0130ZR	Metal Pin (Green)	1
C0130ZS	Metal Pin (Red)	1

40-3.1 Spare Parts (Continued)

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
C0131HA	Spring	1
C0131HN	Set Point Assembly	1
C0131HU	Movement Assembly	1
C0131LF	Ink (Green)	2
C0131LG	Ink (Red)	2
C0131MA	Manual Unit Assembly	1
C0133AW	Receiver Assembly	1
C0133AY	Flapper Assembly	1
C0133EK	Bellows	1
C0133EN	Bellows Assembly	2
C0133EP	Lever	2
C0133NF	Gasket	1
C0133RW	Gasket	1
C0133SM	O-Ring	2
C0133TB	Test Switch Assembly	1
C0133WY	Connection	2
C0133WZ	Washer	2
C0134AF	Zero Spring	2
C0134BK	Bellows	2
C0134BP	Gasket	2
C0134BT	Clip	2
C0134CL	O-Ring	1
C0134EA	Retaining Ring	2
C0134EC	Retaining Ring	2
C0134EX	O-Ring	2

40-3.1 Spare Parts (Continued)

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
C0134KW	O-Ring	2
C0134LC	Bellows (Pair)	1
C0134LL	Nozzle	2
C0134RN	Gasket	2
C0134TF	Gasket	1
C0134YA	Bellows Assembly	2
C0134YC	Diaphragm	2
C0134ZY	Reed Switch	2
C0135PB	Front Plate	1
C0135PC	Front Plate	1
C0135PL	Adj. Link Assembly	1

40-4 Requisition No. MR-40-104

40-4.1 Spare Parts

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
B6301YY	Pin	2
C0100M	Gasket	2
C0112AE	Strainer Assembly	
C0123AS	O-Ring	4
C0123KK	Steel Ball	1
C0125AT	Screw Assembly	2
C0125BB	O-Ring	2
C0126EF	Roller	2
C0127CM	O-Ring	5
C0130UH	Manifold Valve	1
C0130ZR	Metal Pin (Green)	1
C0120ZS	Metal Pin (Red)	1
C0131HA	Spring	1
C0131HN	Set Point Assembly	1
C0131HU	Movement Assembly	1
C0131LF	Ink (Green)	2
C0131LG	Ink (Red)	2
C0131MA	Manual Unit Assembly	1
C0133AW	Receiver Assembly	1
C0133AY	Flapper Assembly	1
C0133EK	Bellows	1
C0133EN	Bellows Assembly	2
C0133EP	Lever	2

40-4.1 SPARE PARTS (Continued)

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
C0135RF	Gasket	2
C0135RY	Gasket	2
C0135TL	Gasket	1
C0135YE	Spring	5
C0135YN	Diaphragm	3
C0135YR	Screw	3
C0135YT	Seat	3
C0135YW	Relay - 40G	3
C0135YX	Ball	3
C0136CH	Spider Assembly	2
C0137FY	Screw	1
C0137RT	Tee Molding	1
C0138BE	Tube	2
C0138CB	Bellows Assembly	1
C0138CE	Tubing Assembly	3
C0138CL	Connection	3
C0138FT	Tube	2
C0138NR	Movement Assembly	1
C0139EN	Relay Manifold	1
C7135BK	Relay - 40G	1
D0124JG	Restrictor	2
D0129GH	Screw	2
G0105CL	Bearing	2
M0139AG	Fuse	1
N0121EE	Fuse	1

40-4.1 SPARE PARTS (Continued)

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
N0149NP	Screw	2
N0206EC	Screw	1
N0230BP	Contact	3
U0101KR	Spring Assembly	2
U0101KZ	Spring	2
U0101LB	Flexure	2
U0102EW	Nozzle	2
U0103FP	Screen	2
U0104LF	Washer	1
U0104PP	Screw	4
U0104RC	Washer	2
U0106PF	Orifice Screw	1
U0108CB	Bellows Assembly	1
U0108EC	Gasket	1
U0108EF	Worm Gear	1
U0108LL	Counter Gear	1
U0108LM	Gear	1
U0108LP	Idler Gear	1
U0108XC	Shaft Assembly	1
U0108XR	Mounting Column	1
U0108XS	Ball	1
U0109EB	Clamp Lever	1
U0110AX	Gasket	1
U0118CE	O-Ring	2
U0118CK	Nozzle	2

40-4.1 SPARE PARTS (Continued)

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
U0118CL	Nozzle	2
U0118EC	O-Ring	1
U0118EE	Bellows Assembly	1
U0118EP	Vent Screen	2
U0118FR	Bellows Assembly	1
U0118KK	Gasket	1
U0119WX	Gasket	2
U0119XK	Bezel Assembly	1
U0119YQ	Force Pin Assembly	1
U0123AM	Bellows Assembly	1
U0123BC	Bellows Assembly	1
U0124BW	Screw	1
X0101CA	Adj. Link Assembly	1
X0101NC	Adj. Link Assembly	1
X0104BM	Stop Nut	2
X0106AS	Retaining Ring	2
X0106CR	Retaining Ring	1
X0116CS	Screw	2
X0144AC	O-Ring	3
X0145BW	O-Ring	2
X0168DP	O-Ring	2
0005653	Washer	2
0006535	Screw	1
0012621	1-19 Box Pens	1
0012622	1-19 Box Pens	1
0022006	Fuse	5

40-4.1 Spare Parts (Continued)

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
N0149NP	Screw	2
N0206EC	Screw	1
N0230BP	Contact	3
U0101KR	Spring Assembly	2
U0101KZ	Spring	2
U0101LB	Flexure	2
U0102EW	Nozzle	2
U0103FP	Screen	2
U0104LF	Washer	1
U0104PP	Screw	4
U0104RC	Washer	2
U0106PF	Orifice Screw	1
U0108CB	Bellows Assembly	1
U0108EC	Gasket	1
U0108EF	Worm Gear	1
U0108LL	Counter Gear	1
U0108LM	Gear	1
U0108LP	Idler Gear	1
U0108XC	Shaft Assembly	1
U0108XR	Mounting Column	1
U0108XS	Ball	1
U0109EB	Clamp Lever	1
U0110AX	Gasket	1
U0118CE	O-Ring	2
U0118CK	Nozzle	

40-4.1 Spare Parts (Continued)

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
U0118C1	Nozzle	2
U0118EC	O-Ring	1
U0118EE	Bellows Assembly	1
U0118EP	Vent Screen	2
U0118FR	Bellows Assembly	1
U0118KK	Gasket	1
U0119WX	Gasket	2
U0119XK	Bezel Assembly	1
U0119YQ	Force Pin Assembly	1
U0123AM	Bellows Assembly	1
U0123BC	Bellows Assembly	1
U0124BW	Screw	1
X0101CA	Adj. Link Assembly	1
X010NC	Adj. Link Assembly	1
X0104BM	Stop Nut	2
X0106AS	Retaining Ring	2
X0106CR	Retaining Ring	1
X0116CS	Screw	2
X0144AC	O-Ring	3
X0145BW	O-Ring	2
X0168DP	O-Ring	2
0005653	Washer	2
0006535	Screw	1
0012621	1-19 Box Pens	1
0012622	1-19 Box Pens	1
0022006	Fuse	5

40-5 Requisition No.: MR-40-105

40-5.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
<u>For FI-111</u>		
	Size 15 Float 316 Integral Magnetic	1
626Z015AAD	Pointer	1
063B024AWA	Ball Bearing	1
<u>For FI/FS - 112</u>		
W711-C-003-ZA	Relay	1
F-375-B-015-SU-A	"O" Ring	1
S-863-Z-002-AAA	Switch Assembly	1
G-349-Z-000-AA-A	Float	1

40-6 Requisition No.: MR-40-106

40-6.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
P1200-00	Switch w/leads	2 ea.
P1201-00	Switch w/leads	2 ea.
P1103-00	Switch Mechanism	2 ea.

40-7 Requisition No.: MR-40-107

40-7.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
K-7500	LSI Chip	1
968-081-00	7 Segment LED	1

40-8 Requisition No.: MR-40-108

40-8.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	Size #11 Glass	1
	Size #11 Mica-Shield	1
	Size #11 Gasket Set	1
	Size #12 Glass	2
	Size #12 Mica-Shield	2
	Size #12 Gasket Set	2
	Size #20 Glass	1
	Size #20 Mica-Shield	1
	Size #20 Gasket Set	1

40-9 Requisition No.: MR-40-109

40-9.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
Spare 1	0-60 psig Pressure Gauge w/Gauge Protector	1
Spare 2	0-160 psig Pressure Gauge with Syphon	1
Spare 3	0-160 psig Pressure Gauge	1
Spare 4	0-60 psig Pressure Gauge	1
Spare 5	0-60 psig Pressure Gauge w/Gauge Protector	1
Spare 6	30 in. Hg Vacuum to 30 psig Pressure Gauge with Syphon	1

40-10 Requisition No.: MR-40-110

40-10.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	3" 0-150°F Temperature Gauge-4" Stem	1
	5" 0-250°F Temperature Gauge-12" Stem w/Well	1
	5" 0-250°F Temperature Gauge-4" Stem w/Well	1
	5" 0-250°F Temperature Gauge-6" Stem w/Well	1

40-11 Requisition No.: MR-40-111

40-11.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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For PSV-313A, B, C

	Disc (316SS)	3
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	Set of Gaskets (Soft Iron)	3
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	Bellows (316SS-Teflon Coated)	3
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	Bellows Gasket (Teflon Coated)	3
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For PSV-363

	Disc (316SS)	1
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	Set of Gaskets (Soft Iron)	1
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	Bellows (316LSS-Teflon Coated)	1
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	Bellows Gasket (Teflon Coated)	1
--	--------------------------------	---

For PSV-315

	Disc (316SS)	1
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	Set of Gaskets (Soft Iron)	1
--	----------------------------	---

	Bellows (316LSS-Teflon Coated)	1
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	Bellows Gasket (Teflon Coated)	1
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40-12 Requisition No.: MR-40-112

40-12.1 SPARE PARTS

Part No.

Description

Qty.

40-13 Requisition No.: MR-40-113

40-13.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
<u>PCV 384 MILTON ROY MODEL 747-027-20</u>		
298	Diaphragm	1 ea.
24(B)	Valve Seat	1 ea.
25	Gasket	1 ea.
<u>PCV 385 MILTON ROY MODEL 746-023-20</u>		
298	Diaphragm	1 ea.
24(B)	Valve Seat	1 ea.
25	Gasket	1 ea.

40-14 Requisition No.: MR-40-114

40-14.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
89-7804-001	Nozzle Lever Kit	1
89-7803-001	Relay Kit	1
89-3611-001	Relay Gasket Kit	1

40-15 Requisition No.: MR-40-115A

40-15.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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40-16 Requisition No.: MR-40-115B

40-16.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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40-17 Requisition No.: MR-40-116

40-17.1 SPARE PARTS

Part No.

Description

Qty.

40-18 Requisition No.: MR-40-117

40-18.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
6479-0	Housing Gasket	1
33358-0	Disc (hard rubber)	1
1046-003	Thrust roller	1
11151-004	Thrust roller insert	1
1268-0	Washer	1

40-19 Requisition No.: MR-40-119

40-19.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	Spare for TE-501A	1
	Spare for TE-501C	1
	Spare for TE-501D	1
	Spare for TE-535A	1
	Spare for TE-535C	1

40-20 Requisition No.: MR-40-123

40-20.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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40-21 Requisition No.: MR-40-124

40-21.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
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40-22 Requisition No.: MR-40-125

40-22.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
38-P	Paddle (6")	1
25-C	Cover (non-explosion proof)	1
30-MS	Micro-Switch	2
25-WN	O-Ring Seal (non-explosion proof)	5
27-S	Saddle Assembly	1
29-S	Springs (7 per pkg.)	1 pkg.
27-B	Bearings (2 per pkg.)	1 pkg.

40-23 Requisition No.: MR-40-126

40-23.1 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
225629	H ₂ S Sensor	5

41-1 TWENTY-INCH MAIN STEAM VALVE WITH OPERATOR

41-1.1 PURCHASE DATA

Manufacturer: WKM
Quantity: 1
Equip. Tag No.: 41-1
Spec. No.: See Data Sheets
Requisition No.: MR-41-102
Purchase Order No.: 1028
Manufacturer's Contract No.: N/A

41-1.2 SPARE PARTS

<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
	Packing Set	1 ea.
	Seat Seals	2 ea.
	Bonnet Seals	1 set
	1/2" Packing Fitting Assembly	1 ea.
	1" Body Drain Fitting	1 ea.
	Plastic Packing	1 box
	Seat Grease	5 gal.
	Torque Switch Assembly	1 ea.
	Limit Switch Assembly	1 ea.
	Window for Indicator	1 ea.
	Gaskets and Bolts for Compartment Cover	1 set