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NUREG-0241
COO-2477-5
VOL. 2 of 2

1

1 IN A SERIES OF 8

Commercial Electric Power Cost Studies

Prepared for the Nuclear
Regulatory Commission and
The Energy Research &
Development Administration by
United Engineers &
Constructors Inc.

Capital Cost: Pressurized Water Reactor Plant

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13.2

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Capital Cost: Pressurized Water Reactor Plant

Commercial Electric Power Cost Studies

Prepared for the Nuclear Regulatory Commission under contract No. AT (49-24)-0351 and The Energy Research & Development Administration under contract No.

EY-76-C-02-2477 by United Engineers & Constructors Inc., 30 South 17th Street, P.O. Box 8223, Philadelphia, Pa. 19101

June 1977

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1

VOL. 2 of 2

Reg

1	Capital Cost: Pressurized Water Reactor Plant
NUREG-0241, COO-2477-5	Volume 2 of 2
2	Capital Cost: Boiling Water Reactor Plant
NUREG-0242, COO-2477-6	
3	Capital Cost: High and Low Sulfur Coal Plants—1200 MWe
NUREG-0243, COO-2477-7	
4	Capital Cost: Low and High Sulfur Coal Plants—800 MWe
NUREG-0244, COO-2477-8	
5	Capital Cost Addendum: Multi-Unit Coal and Nuclear Stations
NUREG-0245, COO-2477-9	
6	Fuel Supply Investment Cost: Coal and Nuclear
NUREG-0246, COO-2477-10	
7	Cooling Systems Addendum: Capital and Total Generating Cost Studies
NUREG-0247, COO-2477-11	
8	Total Generating Costs: Coal and Nuclear Plants
NUREG-0248, COO-2477-12	

SECTION 4
DRAWINGS

SECTION 4

DRAWINGS

This section contains the drawings for the 1139 MWe Pressurized Water Reactor described in Section 3. The drawings include a Plot Plan, General Arrangement Drawings, Flow Diagrams, Block Diagrams and One Line Diagrams.

<u>Drawing Number</u>	<u>Title</u>
6509.003-P-1	Symbol Legend for Flow and Block Diagrams
6509.003-P-2	Plot Plan
6509.003-P-3	General Arrangement Plan at Elevation 18'-0"
6509.003-P-4	General Arrangement Plan at Elevation 73'-0"
6509.003-P-5	General Arrangement Longitudinal Sections "A-A" and "B-B"
6509.003-P-6	Steam Heat Balance Diagram
6509.003-P-7	Mechanical Flow Diagram - Main Steam System
6509.003-P-8	Mechanical Flow Diagram - Extraction Steam System
6509.003-P-9	Mechanical Flow Diagram - Condensate and Feedwater System
6509.003-P-10	Mechanical Flow Diagram - Moisture Separator, Reheater and Heater Drain System
6509.003-P-11	One Line Diagram - Unit Electrical Distribution
6509.003-P-12	One Line Diagram d-c Distribution System
6509.003-P-13	Nuclear Block Diagram - Steam Generator Blowdown System
6509.003-P-14	Nuclear Block Diagram - Radioactive Liquid Waste System
6509.003-P-15	Nuclear Block Diagram - Radioactive Gaseous Waste System
6509.003-P-16	Nuclear Block Diagram - Radioactive Solid Waste System
6509.003-P-17	Nuclear Block Diagram - Reactor Make-up Water System
6509.003-P-18	Nuclear Block Diagram - Combustible Gas Control System
6509.003-P-19	Nuclear Block Diagram - Spent Fuel Pool Cooling System
6509.003-P-20	Nuclear Block Diagram - Residual Heat Removal System
6509.003-P-21	Nuclear Block Diagram - Reactor Coolant System
6509.003-P-22	Nuclear Flow Diagram - Chemical and Volume Control System
6509.003-P-23	Nuclear Flow Diagram - Safety Injection System
6509.003-P-24	Nuclear Block Diagram - Boron Recycle System
6509.003-P-25	Nuclear Block Diagram - Containment Spray System
6509.003-P-26	Nuclear Block Diagram - Nuclear Service Water System
6509.003-P-27	Nuclear Block Diagram - Primary Component Cooling Water System

VALVE BODIES

OPEN	CLOSED	
		GATE
		GLOBE
		BUTTERFLY
		THREE WAY
		ANGLE
		SAFETY OR RELIEF
		SWING CHECK
		STOP CHECK
		SAUNDERS (WIER)
		FIXED ORIFICE

VALVE ACTUATOR

T	HANDWHEEL - MANUAL
	GEAR-MANUAL
	ELECTRIC MOTOR
	SOLENOID (SPRING OPPOSED)
	PISTON OR CYLINDER
	ELECTRO-HYDRAULIC
	DIAPHRAGM (SPRING OPPOSED)

LINE DESIGNATIONS

	LINE CONTINUES TO
	LINE CONTINUED FROM
	SAFETY CLASS
	NON NUCLEAR
	PRIMARY PROCESS FLOW
	SECONDARY PROCESS FLOW
	CONTAINMENT WALL
N N S	NON NUCLEAR SAFETY

EQUIPMENT SYMBOLS

	FILTER		STRAINER
	HEAT EXCHANGER TUBE END		
	HEAT EXCHANGER SHELL SIDE		
	TANK		
	STEAM GENERATOR		
	HORIZONTAL PUMP		
	VERTICAL PUMP		
	POSITIVE DISPLACEMENT PUMP

- PLANT NOMENCLATURE
- ① REACTOR CONTAINMENT BUILDING
 - ② FUEL STORAGE BUILDING
 - ③ CONTROL & ESSENTIAL SWITCHGEAR BUILDING
 - ④ DIESEL GENERATOR & FUEL OIL STORAGE BUILDING
 - ⑤ PRIMARY AUXILIARY BUILDING
 - ⑥ WASTE PROCESS BUILDING
 - ⑦ ULTIMATE HEAT SINK COOLING TOWER STRUCTURE
 - ⑧ CONDENSATE STORAGE TANK
 - ⑨ CIRCULATING WATER & SERVICE WATER PUMP HOUSE
 - ⑩ MAIN COOLING TOWERS
 - ⑪ SERVICE & ADMINISTRATION BUILDING
 - ⑫ TURBINE BUILDING
 - ⑬ TURBINE HEATER BAY
 - ⑭ SWITCHYARD
 - ⑮ HOLDING POND PLANT EFFLUENT
 - ⑯ FIRE PUMP HOUSE
 - ⑰ FIRE WATER STORAGE TANKS
 - ⑱ TRANSFORMER YARD
 - ⑲ CONTROL ROOM EMERGENCY AIR INTAKE STRUCTURES
 - ⑳ MAKE-UP WATER INTAKE STRUCTURE
 - ㉑ DEMINERALIZED WATER STORAGE TANK
 - ㉒ FUEL OIL STORAGE TANK
 - ㉓ EQUIPMENT VAULT
 - ㉔ TANK FARM
 - ㉕ NON-ESSENTIAL SWITCHGEAR BUILDING
 - ㉖ MAIN STEAM & FEEDWATER PIPE ENCLOSURES
 - ㉗ HYDROGEN RECOMBINER BUILDING
 - ㉘ EMERGENCY FEEDWATER PUMP HOUSE & ELECTRICAL PENETRATION AREA
 - ㉙ MAKE-UP WATER PRETREATMENT BUILDING

100 0 100 200
 SCALE (IN FEET)

PLOT PLAN
 1139 MWe PWR PLANT
 MIDDLETOWN HYPOTHETICAL SITE
United Engineers a constructor inc.
 6509.003-P- 2

6509.003 P-3

LOOP-A

TWO (2) LOOPS REQUIRED PER UNIT
 LOOP-A- SHOWN- LOOP-B- IDENTICAL

NOTE
 FOR SYMBOL LEGEND SEE
 DWG 6509.003-P-1.

NOTE
FOR SYMBOL LEGEND
SEE DWG. 6509.003-P-1

NOTE
FOR SYMBOL LEGEND SEE
DWG 6509 003 P 1

NUCLEAR BLOCK DIAGRAM
BORON RECYCLE SYSTEM
1139 MWe PWR PLANT
MIDDLETOWN HYPOTHETICAL SITE

united engineers & constructors Inc.

6509.003-P-24

NOTE
FOR SYMBOL LEGEND SEE
DWG 6509 003 P-1

NUCLEAR FLOW DIAGRAM
CHEMICAL & VOLUME CONTROL SYS.
1139 MWe PWR PLANT
MIDDLETOWN HYPOTHETICAL SITE

united engineers a construction inc.

6509.003-P-22

LOOP-A
 FOUR (4) LOOPS REQUIRED PER SYSTEM
 LOOP-A- SHOWN, LOOP B,C,+D
 IDENTICAL TO-A- EXCEPT AS NOTED

NOTE
 FOR SYMBOL LEGEND SEE
 DWG 6509.003-P-1.

NUCLEAR BLOCK DIAGRAM REACTOR COOLANT SYSTEM 1139 MWe PWR PLANT MIDDLE TOWN HYPOTHETICAL SITE
6509.003-P-21

NOTE
FOR SYMBOL LEGEND SEE
DWG 6509 003 P 1

NOTE
FOR SYMBOL LEGEND SEE
DWG 6509.003-P-1

NUCLEAR BLOCK DIAGRAM
SPENT FUEL POOL COOLING SYSTEM
1139 MWe PWR PLANT
MIDDLETOWN HYPOTHETICAL SITE
 united engineers & constructors inc.
6509.003-P-19

NOTE
FOR SYMBOL LEGEND SEE
DWG 6509.003-P-1

NOTE
FOR SYMBOL LEGEND, SEE
DWG 6509.003 P-1

NOTE

FOR SYMBOL LEGEND SEE
DWG 6509.003-P-1.

NUCLEAR BLOCK DIAGRAM
RADIOACTIVE SOLID WASTE SYS.
1139 MWe PWR PLANT
MIDDLETOWN HYPOTHETICAL SITE

United Engineers & Constructors Inc.

6509.003-P-16

NOTE
FOR SYMBOL LEGEND SEE
DWG 6509.003-P-1

NUCLEAR BLOCK DIAGRAM
RADIOACTIVE GASEOUS WASTE SYS.
1139 MWe PWR PLANT
MIDDLETOWN HYPOTHETICAL SITE

united engineers & constructors inc.

6509.003-P-15

NOTE
FOR SYMBOL LEGEND SEE
DWG 6509.003-P-1.

NUCLEAR BLOCK DIAGRAM
STM. GEN. BLOWDOWN SYSTEM
1139 MWe PWR PLANT
MIDDLETOWN HYPOTHETICAL SITE

united engineers & constructors inc.

6509.003-P-13

MECHANICAL FLOW DIAGRAM
 MOISTURE SEPARATOR, REHEATER
 AND HEATER DRAIN SYSTEM
 1139 MW PWR PLANT
 MIDDLETOWN HYPOTHETICAL SITE
 6509.003-P-10

TYPICAL OF (3) THREE TRAINS (A, B & C), TRAIN 'A' SHOWN, TRAINS 'B' & 'C' IDENTICAL TO TRAIN 'A'

NOTE
FOR SYMBOL LEGEND SEE
DWG 6509003 P 1

LEGEND:
 H, h - ENTHALPY - BTU/POUND
 # - FLOW - POUND/HOUR
 P - PRESSURE - PSIA
 F - TEMPERATURE - DEGREES FAHRENHEIT

*** PERFORMANCE:**

TOTAL TURBINE OUTPUT	1,211,682 KW
FIXED LOSSES	5,396 KW
GENERATOR LOSSES	13,886 KW
GENERATOR OUTPUT	1,192,400 KW
AUXILIARY POWER	55,790 KW
NET POWER TO TRANSFORMER	1,138,610 KW
NET STATION HEAT RATE	13.3 BTU/KW-HR
NET STATION HEAT RATE	10,224 BTU/KW-HR
THERMAL EFFICIENCY	33.38%

* BASED ON WARRANTED STEAM FLOW
 ** BASED ON CORE THERMAL OUTPUT OF 3411 MWt

NOTE
 FOR SYMBOL LEGEND SEE
 DWG 6509.003-P-1.

**STEAM HEAT BALANCE
 DIAGRAM
 1139 MWe PWR PLANT
 MIDDLETOWN HYPOTHETICAL SITE**

6509.003-P-6

SECTION 5
EQUIPMENT LIST

SECTION 5

EQUIPMENT LIST

5.1 INTRODUCTION

This section describes, in detail, the major components of the PWR power plant design developed for this study. Each of these are described in terms of quantity, type, orientation, capacity or flow, design pressure, design temperature, etc., in sufficient detail to permit preparation of the cost estimate in Section 3, Volume 1 of this report.

As a convenience, the components are listed in accordance with an expanded AEC code-of-accounts (USAEC Report NUS-531), which permits correlation and cross-referencing with the detailed cost estimate.

In order to maintain consistency for the various systems in the equipment list, nine standard sub-account headings are used to group similar items, as follows:

1. Rotating Machinery
2. Heat Transfer Equipment
3. Tanks and Pressure Vessels
4. Purification and Filtration Equipment
5. Piping or Piping and Ductwork
6. Valves or Valves and Dampers
7. Piping - Miscellaneous Items
8. Instrumentation and Control
9. Foundation/Skids

As a guide for the use of this equipment list, it is important to note that the unit quantities for piping, valves and structural items are excluded and only the code-of-accounts listings are shown. However, the quantities for these items and their associated costs appear in the detailed cost estimate in Section 3 of this report.

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
20 .	LAND AND LAND RIGHTS	SEE COST ESTIMATE
21 .	STRUCTURES + IMPROVEMENTS	
211.	YARDWORK	SEE COST ESTIMATE FOR STRUCT QUANTITIES
211.1	GENERAL YARDWORK	
211.11	GENERAL CUT + FILL	
211.111	CUT + FILL BEYOND OPEN CUT	
211.112	CLEARING + GRUBBING	
211.113	FINE GRADING	
211.114	LANDSCAPING	
211.12	ROADS, WALKS + PARKING ARE	
211.121	SUBGRADE PREPARATION	
211.122	ON-SITE ROADS+PARKING AREA	
211.1221	ROADS-ASPHALT	
211.1222	PARKING AREAS-ASPHALT	
211.1223	CURBS-CONCRETE	
211.123	WALKS-CONCRETE	
211.14	FENCING + GATES	
211.141	PERMANENT FENCE	
211.142	GATE HOUSE	
211.15	SANITARY SEWER FACILITY	
211.151	SEWAGE TRTMT FACILITY	
211.152	SANITARY PIPING	
211.1521	2 IN + SMALLER	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
211.1522	2.5 IN + LARGER	
211.15221	CI BELL+SPIGOT/NNS	
211.153	OIL SEPARATORS	
211.16	YARD DRAINAGE STORM SEWERS	
211.161	DRAINS	
211.162	PIPING	
211.1621	2 IN + SMALLER	
211.1622	2.5 IN + LARGER	
211.16221	GALV/NNS	
211.17	ROADWAY + YARD LIGHTING	
211.19	SETTLING BASINS	
211.191	EARTH EXCAVATION	
211.192	ROCK EXCAVATION	
211.193	BACKFILL	
211.194	PUMPING	
211.195	FORMWORK	
211.196	REINF. STEEL	
211.197	CONCRETE	
211.198	SHEET PILING	
211.199	RIP-RAP (12 IN. THICK)	
211.4	RAILROADS	
211.41	CUT + FILL	
211.42	GRADING	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
211.43	TRACK (BALLAST, TIES, RAIL	
211.45	SWITCHES+BUMPERS	
211.451	TURNOUTS (NO. 8)	
211.452	BUMPERS	
211.46	RIP RAP (24 IN. THICK)	
211.7	STRUCTURE ASSOCIATED YDWK	
211.71	CUT + FILL	
211.711	OPEN CUT	
211.7111	DEWATERING	
211.7112	EARTH EXCAVATION	
211.7113	ROCK EXCAVATION	
211.712	FILL + BKFILL (PLACE/COMP)	
211.7121	CATEGORY I FILL	
211.7122	NON-CATEGORY I FILL	
211.7123	AREAL FILL	
211.7124	CONCRETE FILL	
212.	REACTOR CONTAINMENT BLDG	SEE COST ESTIMATE FOR STRUCT QUANTITIES
212.1	BUILDING STRUCTURE	
212.11	EXCAVATION WORK	
212.111	EARTH EXCAVATION	
212.112	ROCK EXCAVATION	
212.113	CONCRETE FILL	
212.114	FILL + BACKFILL	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
212.115	DEWATERING	
212.13	SUBSTRUCTURE CONCRETE	
212.131	FORMWORK	
212.132	REINF. STEEL	
212.133	CONCRETE	
212.134	EMBEDDED STEEL	
212.135	FLOOR FINISH	
212.136	WATERPROOFING	
212.137	CADWELDS	
212.138	CONSTRUCTION JOINTS	
212.139	WELDED WIRE FABRIC	
212.14	SUPERSTRUCTURE	
212.141	CONCRETE WORK	
212.1411	CONTAINMENT SHELL	
212.14111	FORMWORK	
212.14112	REINFORCING STEEL	
212.14113	CONCRETE	
212.14114	EMBEDDED STEEL	
212.14115	RUBBING SURFACES	
212.14116	WATERPROOFING	
212.14117	CADWELDS	
212.14118	CONSTRUCTION JOINTS	
212.1412	CONTAINMENT DOME	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
212.14121	FORMWORK	
212.14122	REINF. STEEL	
212.14123	CONCRETE	
212.14124	EMBEDDED STEEL	
212.14125	RUBBING SURFACES	
212.14126	WATERPROOFING	
212.14127	CADWELDS	
212.14128	CONSTRUCTION JOINTS	
212.1413	INTERIOR CONCRETE	
212.14131	FORMWORK	
212.141311	FORMWORK-WOOD	
212.141312	FORMWORK-METAL	
212.14132	REINFORCING STEEL	
212.14133	CONCRETE	
212.14134	EMBEDDED STEEL	
212.14135	RUBBING SURFACES	
212.14136	REACTOR CAV LINER PLATE	
212.14137	CADWELDS	
212.14138	CONSTRUCTION JOINTS	
212.14139	MAJOR SUPPORT EMBEDMENTS	
212.142	STRUCTURAL + MISC. STEEL	
212.1421	STRUCTURAL STEEL	
212.1422	MISC. FRAMES, ETC.	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
212.1423	FLOOR GRATING (GALV)	
212.1424	STAIR TREADS	
212.1425	HANDRAIL	
212.146	CONTAINMENT LINER	
212.1461	LINER PLATE, STFNRS, PENET	
212.149	PAINTING	
212.1491	CONCRETE	
212.1492	STEELWORK	
212.1493	HANDRAILS	
212.1494	LINER PLATE	
212.1496	METAL DECK	
212.2	BUILDING SERVICES	
212.21	PLUMBING + DRAINS	
212.211	ROOF DRAINS + PIPING	
212.2111	DRAINS	
212.2115	PIPING	
212.212	FLOOR DRAINS + PIPING	
212.2121	DRAINS	
212.2125	PIPING	
212.22	HEATING, VENT + AIR COND	
212.221	PRE-ENTRY PURGE SYSTEM	
212.2211	ROTATING MACHINERY	
212.22111	SUPPLY FAN + MOTOR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
212.221111	SUPPLY FAN	
212.221112	SUPPLY FAN MOTOR	
212.22112	EXHAUST FAN + MOTOR	
212.221121	EXHAUST FAN	
212.221122	EXHAUST FAN MOTOR	
212.2215	PIPING + DUCTWORK	
212.22153	DUCTWORK	
212.2216	VALVES + DAMPERS	
212.22169	SPECIAL VALVES	
212.221691	THREE - WAY	
212.2218	INSTRUMENTATION + CONTROL	
212.2219	SKIDS + FOUNDATIONS	
212.22191	EXHAUST FILTRATION UNIT	
212.222	REFUELING PURGE SYSTEM	
212.2221	ROTATING MACHINERY	
212.22211	SUPPLY FAN + MOTOR	
212.222111	SUPPLY FAN	
212.222112	SUPPLY FAN MOTOR	
212.22212	EXHAUST FAN + MOTOR	
212.222121	EXHAUST FAN	
212.222122	EXHAUST FAN MOTOR	
212.2225	PIPING + DUCTWORK	
212.22253	DUCTWORK	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
212.2226	VALVES + DAMPERS	
212.22266	BUTTERFLY	
212.223	CONTM RECIRC FILTER SYSTEM	
212.2231	ROTATING MACHINERY	
212.22311	RECIRCULATING FANS + MOTOR	
212.223111	RECIRCULATING FAN	QUANTITY - 2 TYPE - CENTRIFUGAL DIRECT DRIVE FLOW RATE - 4000 CFM S.P. - 8 IN EFFICIENCY - SAFETY CLASS - 2 SEISMIC CAT. - I DESIGN CODE -
212.223112	RECIRCULATING FAN MOTOR	MOTOR TYPE - AC INDUCTION HORSEPOWER - 10 HP SPEED - VOLTAGE - 460V, 3 PHASE, 60 HZ
212.2235	PIPING + DUCTWORK	
212.22353	DUCTWORK	GALV/STL 21000 31000
212.2236	VALVES + DAMPERS	
212.22366	BUTTERFLY	
212.2238	INSTRUMENTATION + CONTROLS	TRANSMITTERS - 4 LOCAL INDICATORS - 4 BOARD MOUNTED INDICATORS - 10 FLOW ELEMENTS - 16 TEMPERATURE ELEMENTS - 8 PROCESS SWITCHES - 19
212.2239	SKIDS + FOUNDATIONS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA - COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
212.22391	RECIRC FILTRATION UNIT	<p>QUANTITY - 2</p> <p>FILTER PLENUM:</p> <p>SIZE - 22FTL X 6FTW X 6FTH</p> <p>ARRANGEMENT - 2W X 2H</p> <p>MATERIAL - STEEL</p> <p>PRE-FILTER:</p> <p>MATERIAL - FIBERGLASS</p> <p>FLOW/FILTER - 1000 CFM</p> <p>NO. - 4</p> <p>SIZE - 24IN X 24IN X 2IN</p> <p>EFFECIENCY(%) - 30 ATM. DUST</p> <p>STATIC DP -</p> <p>HEPA FILTER:</p> <p>MATERIAL - FIBERGLASS/ SS FRAME</p> <p>FLOW/FILTER - 1000 CFM</p> <p>NO. - 8</p> <p>SIZE - 24IN X 24IN X 2IN</p> <p>EFFECIENCY(%) - 99.97 (0.3 MICRON)</p> <p>STATIC DP -</p> <p>CHARCOAL FILTERS:</p> <p>TYPE - TRAY(3 TRAYS/FILTER)</p> <p>MATERIAL - ACTIVATED CARBON</p> <p>BULK DENSITY - 31 LB/CUFT</p> <p>DEPTH - 2 IN</p> <p>EFFICIENCY(%) - 99.5 METH. IODIDE</p> <p>99.9 ELEM. IODINE</p> <p>RESIDENCE TIME - 0.25 SEC</p> <p>FLOW/FILTER - 333 CIM/TRAY</p> <p>NO. - 4</p> <p>SAFETY CLASS - 2</p> <p>SEISMIC CAT. - 1</p> <p>DESIGN CODE -</p>
212.224	CRDM COOLING SYSTEM	
212.2241	ROTATING MACHINERY	
212.22411	SUPPLY FANS + MOTORS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
212.224111	SUPPLY FAN	<p>QUANTITY - 4 X 33-1/3 PCT. TYPE - CENTRIFUGAL - BELT DRIVE FLOW RATE - 19000 CFM S.P. - 5 IN EFFICIENCY - SAFETY CLASS - NNS SEISMIC CAT. - I DESIGN CODE -</p>
212.224112	SUPPLY FAN MOTOR	<p>MOTOR TYPE - AC INDUCTION HORSEPOWER - 25 HP SPEED - VOLTAGE 480 V, 3 PHASE, 60 HZ</p>
212.225	RECIRC COOLING SYSTEM	
212.2251	ROTATING MACHINERY	
212.22511	CHILLERS	
212.225111	CHILLER	<p>QUANTITY - 2 X 100 PCT. TYPE - CENTRIFUGAL REFRIG. TONS - 400 FLOW: CHILL WTR - 800 GPM CIRC WTR - 1555 GPM TEMPERATURE: CHILL WTR - 64 MAX TO 48 MIN DEG F CIRC WTR - 105 MAX TO 95 MIN DEG F SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE ASME SECTION VIII</p>
212.225112	CHILLER MOTOR	<p>TYPE - HORSEPOWER - 400 HP SPEED - VOLTAGE - 4 KV, 3 PHASE, 60 HZ</p>
212.22512	CHILLED WATER PUMP + MOTOR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
212.225121	CHILLED WATER PUMP	QUANTITY - 4 x 33 1/3 PCT. TYPE - CENTRIFUGAL ORIENTATION - FLOW RATE - 800 GPM SPEED - TDH - 100 FT BHP - NPSH - EFFICIENCY - DESIGN PRESS - DESIGN TEMP - MATERIAL - CARBON STEEL SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
212.225122	CHILLED WATER PUMP MOTOR	MOTOR TYPE - AC INDUCTION HORSEPOWER - 30 HP SPEED VOLTAGE - 460V, 3 PHASE, 60 HZ
212.2253	TANKS + PRESSURE VESSELS	
212.22531	COMPRESSION TANKS	QUANTITY - 2 ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 200 GAL DESIGN PRESS - DESIGN TEMP - MATERIAL - CARBON STEEL SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
212.22532	AIR SEPARATORS	QUANTITY - 2 ORIENTATION - VERT. W/INTEGRAL STRAIN. DIMENSIONS - VOLUME - CAPACITY OF 800 GPM FLOW DESIGN PRESS - DESIGN TEMP - MATERIAL - SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
212.2255	PIPING	
212.22551	2IN + SMALLER.	
212.225511	CS/NNS	
212.22552	2.5IN + LARGER	
212.225521	CS/NNS	
212.2256	VALVES	
212.22561	GATE	
212.22562	CHECK	
212.22563	GLOBE	
212.22565	SAFETY/RELIEF	
212.22568	PLUG	
212.22569	SPECIAL VALVES	
212.225691	3-WAY MIXING	
212.2257	PIPING - MISC. ITEMS	
212.22571	HANGERS	
212.2258	INSTRUMENTATION + CONTROLS	ALLOWANCE
212.2259	SKIDS + FOUNDATIONS	
212.22591	FAN/COIL COOLING UNIT MTR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
212.223911	FAN/COIL COOLG UNIT	QUANTITY - 6 X 20 PCT. COOLING CAP: SENSIBLE - 1800 MBH LATENT - 83 MBH CHILLED WTR: TEMPERATURE - 48F IN - 64F OUT FLOW - 235 GPM AIR: TEMPERATURE 115F IN - 75F OUT FLOW 42000 CFM FAN: TYPE - CENTRIFUGAL FLOW - 42000 CFM S.P. - 6 IN FILTER TYPE - FIBERGLASS - 2 IN THICK SAFETY CLASS - NNS SEISMIC CAT. - NCNE DESIGN CODE -
212.225912	FAN/COIL COOLG UNIT MOTOR	TYPE HORSEPOWER 100 HP SPEED VOLTAGE 460 V, 3 PHASE, 60 HZ
212.24	LIGHTING+SERVICE POWER	
212.25	ELEVATOR	
212.251	ELEVATOR EQUIPMENT	
212.252	ELEVATOR ENCLOSURE	
213.	TURBINE ROOM + HEATER BAY	SEE COST ESTIMATE FOR STRUCT QUANTITIES
213.1	BUILDING STRUCTURE	
213.11	EXCAVATION WORK	
213.111	EARTH EXCAVATION	
213.112	ROCK EXCAVATION	
213.113	CONCRETE FILL	
213.114	FILL + BACKFILL	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
213.115	DEWATERING	
213.13	SUBSTRUCTURE CONCRETE	
213.131	FORMWORK	
213.132	REINFORCING STEEL	
213.133	CONCRETE	
213.134	EMBEDDED STEEL	
213.135	FLOOR FINISH	
213.136	WATERPROOFING	
213.137	CONSTRUCTION JOINTS	
213.138	RUBBING CONCRETE SURFACE	
213.139	WIRE FABRIC	
213.14	SUPERSTRUCTURE	
213.141	CONCRETE WORK	
213.1411	FORMWORK	
213.14111	FORMWORK-WOOD	
213.14112	FORMWORK-METAL	
213.1412	REINFORCING STEEL	
213.1413	CONCRETE	
213.1414	EMBEDDED STEEL	
213.1415	FLOOR FINISH	
213.1416	WATERPROOFING	
213.1417	RUBBING CONCRETE SURFACES	
213.1418	CONSTRUCTION JOINTS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
213.142	STRUCTURAL + MISC. STEEL	
213.1421	STRUCTURAL STEEL	
213.1422	FLR + PLATFORM SUPPORTS	
213.1423	MISC. FRAMES, ETC.	
213.1424	CHECKERED PLATE	
213.1425	FLOOR GRATING (GALV)	
213.1426	STAIR TREADS	
213.1427	HANDRAIL	
213.143	EXTERIOR WALLS	
213.1431	CONCRETE WALLS	
213.1432	MASONRY WALLS	
213.1433	METAL INSULATED SIDING	
213.144	ROOF DECK	
213.1441	METAL ROOF DECK	
213.1442	CONCRETE PLANK	
213.1443	CONCRETE FILL	
213.1444	REINFORCING STEEL	
213.145	ROOFING + FLASHING	
213.1451	B.U. ROOF INSUL. + FLASH	
213.1452	ELASTOMERIC ROOFING	
213.146	INTERIOR WALLS + PARTITION	
213.1461	CONCRETE WALLS	
213.1462	CONCRETE BLOCK WALLS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
213.1463	METAL PARTITIONS	
213.147	DOORS + WINDOWS	
213.1471	ROLLING STEEL DOORS	
213.1472	PERSONNEL DOORS	
213.1473	SASH + GLAZING	
213.149	PAINTING	
213.1491	CONCRETE	
213.1492	STEELWORK	
213.1493	METAL DECK	
213.1494	HANDRAIL	
213.2	BUILDING SERVICES	
213.21	PLUMBING + DRAINS	
213.211	ROOF DRAINS + PIPING	
213.2111	DRAINS	QUANTITY - 12
213.2115	PIPING	
213.21151	2IN + SMALLER	
213.21152	2.5 IN + LARGER	
213.211521	GALV. STEEL/NNS	
213.212	FLOOR DRAINS + PIPING	
213.2121	DRAINS	QUANTITY - 100 SIZE - 4 IN
213.2125	PIPING	
213.21251	2 IN + SMALLER	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
213.21252	2.5 IN + LARGER	
213.212521	CI/NNS	
213.212522	CS/NNS	
213.212523	PVC/NNS	
213.213	PUMPS.	
213.2131	DRAIN PUMP + MOTOR	
213.21311	DRAIN PUMP	QUANTITY - 2 TYPE - CENTRIFUGAL ORIENTATION - VERTICAL FLOW RATE - 50 GPM SPEED - TDH - BHP - NPSH - EFFICIENCY - DESIGN PRESS - DESIGN TEMP - MATERIAL - CARBON STEEL SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
213.21312	DRAIN PUMP MOTOR	TYPE - AC INDUCTION HORSEPOWER - 3 SPEED - VOLTAGE - 460V, 3 PHASE, 60 HZ
213.2132	FIRE PROTECT PUMP + MOTOR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
213.21321	FIRE PROTECT PUMP	QUANTITY - 2 TYPE - CENTRIFUGAL ORIENTATION - VERTICAL FLOW RATE - 500 SPEED - TDH - BHP - NPSH - EFFICIENCY - DESIGN PRESS - DESIGN TEMP - MATERIAL - CARBON STEEL SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
213.21322	FIRE PROTECT PUMP MOTOR	TYPE - AC INDUCTION HORSEPOWER - 25 SPEED - VOLTAGE - 460V, 3 PHASE 60 HZ
213.214	SANITARY DRAINS + PIPING	
213.2141	SANITARY FIXTURES	WATER CLOSETS: QUANTITY - 2 URINALS: QUANTITY - 2 LAVS: QUANTITY - 4 SERVICE SINKS: QUANTITY - 1
213.2145	PIPING	
213.21451	2IN + SMALLER	
213.214511	CI/NNS	
213.214512	COPPER/NNS	
213.21452	2.5IN + LARGER	
213.214521	CI/NNS	
213.22	HEATING, VENT, + AIR COND.	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
213.221	GENERAL BLDG. VENT	
213.2211	ROTATING MACHINERY	
213.22111	ROOF VENTILATORS + MOTORS	
213.221111	ROOF VENTILATOR	QUANTITY - 10 TYPE - AXIAL VANE FLOW RATE - 90000 CFM S.P. - 1.5 IN SPECIAL - HOOD CURB + AUTO DAMPER SAFETY CLASS - MNS SEISMIC CAT. - NONE DESIGN CODE -
213.221112	ROOF VENTILATOR MOTOR	TYPE - AC INDUCTION HORSEPOWER - 20 SPEED - VOLTAGE - 460V, 3 PHASE, 60 HZ
213.2216	VALVES + DAMPERS	
213.22169	SPECIAL VALVES + DAMPERS	
213.221691	INTAKE LOUVERS	QUANTITY - 20 TYPE - OPERABLE FLOW - 90000 CFM SIZE - 45FT WIDE X 5FT HIGH
213.222	HEATER BAY VENT	
213.2221	ROTATING MACHINERY	
213.22211	ROOF VENTILATORS + MOTORS	
213.222111	ROOF VENTILATOR	QUANTITY - 10 TYPE - AXIAL VANE FLOW RATE - 90000 CFM S.P. - 1.5 IN SPECIAL - HOOD CURB + AUTO DAMPER SAFETY CLASS - MNS SEISMIC CAT. - NONE DESIGN CODE -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
213.222112	ROOF VENTILATOR MOTOR	TYPE - AC INDUCTION HORSEPOWER - 20 SPEED - VOLTAGE - 460V, 3 PHASE, 60 HZ
213.223	GENERAL BLDG HEAT	
213.2232	HEAT TRANSFER EQUIPMENT	
213.22321	STEAM HEATER UNITS	QUANTITY - 24 CAPACITY - 300 MBH STEAM PRESS - 50 PSIG - SATURATED STEAM CONSUMP - 330 LB/HR AIR FLOW - 4000 CFM BLOWER HP - 1.5 BLOWER VOLTS - 460V, 3 PHASE, 60 HZ SAFETY CLASS - NNS SEISMIC CAT. - NONE
213.2235	PIPING	
213.22351	2IN + SMALLER	
213.223511	CS/NNS	
213.22352	2.5IN + LARGER	
213.223521	CS/NNS	
213.2236	VALVES	
213.22361	GATE	
213.22362	CHECK	
213.2237	PIPING - MISC. ITEMS	
213.22371	HANGERS + SUPPORTS	
213.22372	INSULATION	
213.224	LUBE OIL RM VENT	
213.2241	ROTATING MACHINERY	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 M&E/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
213.22411	FANS + MOTORS	
213.224111	FAN	QUANTITY - 1 TYPE - AXIAL WALL FAN FLOW RATE - 7200 CFM S.P. - 0.5 IN SPECIAL - NONE SAFETY CLASS - WNS SEISMIC CAT. - NONE DESIGN CODE -
213.224112	MOTOR	TYPE - AC INDUCTION HORSEPOWER - 2 SPEED - VOLTAGE - 460V, 3 PHASE 60 HZ
213.226	ELV MACH ROOM	
213.2261	ROTATING MACHINERY	
213.22611	FANS + MOTORS	
213.226111	FAN	QUANTITY - 1 TYPE - AXIAL WALL FAN FLOW RATE - 1800 CFM S.P. - 0.5 IN SPECIAL - NONE SAFETY CLASS - WNS SEISMIC CAT. - NONE DESIGN CODE -
213.226112	MOTOR	TYPE - AC INDUCTION HORSEPOWER - 0.5 SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
213.2266	VALVES + DAMPERS	
213.22669	SPECIAL VALVES + DAMPERS	
213.226691	DAMPER	QUANTITY - 1 TYPE - COUNTER BALANCE RELIEF FLOW - 1800 CFM SIZE - 36IN WIDE X 15IN HIGH

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
213.228	INSTRUMENTATION + CONTROL	ALLOWANCE
213.23	FIRE PROTECTION	
213.231	HOSE + SPRAY EQUIPMENT	
213.2311	HOSE REELS	QUANTITY - 16
213.2312	SPRAY HEADS	QUANTITY - 24
213.235	PIPING	
213.2352	2.5IN + LARGER	
213.23521	CS/NNS	
213.236	VALVES	
213.2369	SPECIAL VALVES	
213.23691	DELUGE VALVE	
213.24	LIGHTING+SERVICE POWER	
213.25	ELEVATOR	
213.251	ELEVATOR EQUIP	TYPE - FREIGHT TRAVEL - 70 FT HOISTWAY AREA - 8FT X 10FT SPEED - 125FT/MIN RATED LOAD - 3000 LB
215.	PRIM AUX BLDG + TUNNELS	SEE COST ESTIMATE FOR STRUCT QUANTITIES
215.1	BUILDING STRUCTURE	
215.11	EXCAVATION WORK	
215.111	EARTH EXCAVATION	
215.112	ROCK EXCAVATION	
215.113	CONCRETE FILL	
215.114	FILL + BACKFILL	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
215.115	DEWATERING	
215.13	SUBSTRUCTURE CONCRETE	
215.131	FORMWORK	
215.132	REINF. STEEL	
215.133	CONCRETE	
215.134	EMBEDDED STEEL	
215.135	FLOOR FINISH	
215.136	WATERPROOFING	
215.137	CONSTRUCTION JOINTS	
215.138	WIRE FABRIC	
215.139	RUBBING CONCRETE SURFACES	
215.14	SUPERSTRUCTURE	
215.141	CONCRETE WORK	
215.1411	FORMWORK	
215.14111	FORMWORK-WOOD	
215.14112	FORMWORK-METAL	
215.1412	REINFORCING STEEL	
215.1413	CONCRETE	
215.1414	EMBEDDED STEEL	
215.1415	FLOOR FINISH	
215.1416	WATERPROOFING	
215.1417	RUBBING CONCRETE SURFACE	
215.1418	CONSTRUCTION JOINTS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
215.1419	REMOVABLE PLUGS	
215.142	STRUCTURAL + MISC. STEEL	
215.1421	STRUCTURAL STEEL	
215.1422	FLOOR + PLATFORM SPTS.	
215.1423	MISC. FRAMES, ETC.	
215.1425	FLOOR GRATING (GALV.)	
215.1426	STAIR TREADS	
215.1427	HANDRAIL	
215.143	EXTERIOR WALLS	
215.1431	CONCRETE	
215.144	ROOF DECK	
215.1441	METAL ROOF DECK	
215.145	ROOFING + FLASHING	
215.1451	B.U. ROOF, INSUL + FLASHIN	
215.1452	B.U. ROOF + FLASH (NO INSU	
215.146	INTERIOR WALLS + PARTITION	
215.1461	CONCRETE WALLS	
215.1462	MASONRY WALLS	
215.1463	METAL PARTITIONS	
215.147	DOORS + WINDOWS	
215.1471	ROLLING STEEL DOOR	
215.1472	PERSONNEL DOORS	
215.1473	SASH & GLAZING	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
215.149	PAINTING	
215.1491	CONCRETE	
215.1492	STEELWORK	
215.1493	METAL DECK	
215.1494	HANDRAIL	
215.2	BUILDING SERVICES	
215.21	PLUMBING + DRAINS	
215.211	ROOF DRAINS + PIPING	
215.2111	DRAINS	QUANTITY - 9 SIZE - 6 IN. MATERIAL - CARBON STEEL
215.2115	PIPING	
215.21152	2.5 IN + LARGER	
215.211521	GALV STEEL/NNS	
215.212	FLOOR DRAINS + PIPING	
215.2121	DRAINS	QUANTITY - 6 SIZE - 4 IN MATERIAL - CARBON STEEL
215.2125	PIPING	
215.21252	2.5 IN + LARGER	
215.212521	CI/NNS	
215.213	SUMP PUMPS + MOTORS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
215.2131	SUMP PUMPS	QUANTITY - 2 TYPE - CENTRIFUGAL ORIENTATION - VERTICAL FLOW RATE - 50 GPM SPEED - TDH - BHP - NPSH - EFFICIENCY - DESIGN PRESS - DESIGN TEMP - MATERIAL - CARBON STEEL SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
215.2132	SUMP PUMP MOTORS	TYPE - AC INDUCTION HORSEPOWER - 3 SPEED - VOLTAGE - 460V, 3 PHASE, 60 HZ
215.22	HEATING, VENT, + AIR COND	
215.221	HOT WTR HEAT SYS	
215.2211	ROTATING MACHINERY	
215.22111	HOT WTR COIL CIRC PUMP+MTR	
215.221111	HOT WTR COIL CIRC PUMP+MTR	QUANTITY - 3 X 50 PCT TYPE - CENTRIFUGAL ORIENTATION - VERTICAL FLOW RATE - 265 GPM SPEED - 1750 RPM TDH - 50 FT BHP - NPSH - EFFICIENCY - DESIGN PRESS - 150 PSIG DESIGN TEMP - 250 F MATERIAL - CARBON STEEL SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
215.221112	HOT WTR COIL CIRC PUMP+MTR	TYPE - AC INDUCTION HORSEPOWER - 7.5 SPEED - 1750 RPM VOLTAGE - 460V, 3 PHASE, 60HZ
215.221112	PAB REHEAT COIL PUMP + MTR	
215.221121	PAB REHEAT COIL PUMP + MTR	QUANTITY - 1 TYPE - CENTRIFUGAL ORIENTATION - IN LINE FLOW RATE - 15 GPM SPEED - 1750 RPM TDH - 20 FT BHP - NPSH - EFFICIENCY - DESIGN PRESS - 150 PSIG DESIGN TEMP - 250 F MATERIAL - CARBON STEEL SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
215.221122	PAB REHEAT COIL PUMP MOTOR	TYPE - AC INDUCTION HORSEPOWER - 0.33 SPEED - 1750 RPM VOLTAGE - 115V, 1 PHASE, 60 HZ
215.22113	FILTER RM CIRC PUMP + MTR	
215.221131	FILTER RM CIRC PUMP + MTR	QUANTITY - 1 TYPE - CENTRIFUGAL ORIENTATION - IN LINE FLOW RATE - 10 GPM SPEED - 1750 RPM TDH - 20 FT BHP - NPSH - EFFICIENCY - DESIGN PRESS - DESIGN TEMP - 150 PSIG MATERIAL - CARBON STEEL SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
215.221132	FILTER RM CIRC PUMP MOTOR	<p>TYPE - AC INDUCTION</p> <p>HORSEPOWER - 0.33</p> <p>SPEED - 1750</p> <p>VOLTAGE - 115V, 3 PHASE, 60 HZ</p>
215.2212	HEAT TRANSFER EQUIP	
215.22121	MAIN HEAT HOT WATER COILS	<p>QUANTITY - 24</p> <p>TYPE - HOT WATER COIL</p> <p>CAPACITY - 441 MBH</p> <p>AIR FLOW - 10000 CFM</p> <p>WATER FLOW - 21 GPM</p> <p>DESIGN PRESS - 150 PSIG</p> <p>DESIGN TEMP - 250 F</p> <p>COIL SIZE - 72IN X 30IN - 2 ROWS</p> <p>COIL ARRANG - TWO BANKS OF 12 COILS EA</p> <p>MATERIAL -</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT. - NONE</p> <p>DESIGN CODE -</p>
215.22122	UNIT HEATERS	<p>QUANTITY - 4</p> <p>TYPE - HOT WATER</p> <p>CAPACITY - 35.25 MBH</p> <p>AIR FLOW - 710 CFM</p> <p>WATER FLOW -</p> <p>DESIGN PRESS - 150 PSIG</p> <p>DESIGN TEMP - 250 F</p> <p>MATERIAL -</p> <p>FAN HP - 0.05</p> <p>FAN VOLTAGE - 115V, 1 PHASE, 60 HZ</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT - NONE</p> <p>DESIGN CODE -</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
215.22123	REHEAT DUCT COIL	QUANTITY - 1 TYPE - HOT WATER COIL CAPACITY - 121 MBH AIR FLOW - WATER FLOW - 15 GPM DESIGN PRESS - 150 PSIG DESIGN TEMP - 250 F COIL SIZE 30IN X 18IN - 1 ROW MATERIAL - SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE -
215.22124	HOT WATER HEAT EXCHANGER	QUANTITY - 1 TYPE - SHELL + TUBE - STEAM/WTR CAPACITY - 1200 MBH STEAM PRESS - 50 PSIG STEAM TEMP - 298 F STEAM FLOW - 13170 LB/HR WATER FLOW - 605 GPM WATER TEMP: IN - 210 F OUT - 250 F MATERIAL - CARBON STEEL SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE
215.2213	TANKS + PRESSURE VESSELS	
215.22131	COMPRESSION TANKS	QUANTITY - 2 ORIENTATION - VERTICAL DIMENSIONS - 60 IN HIGH X 30 IN DIA VOLUME - 200 GAL DESIGN PRESS - 150 PSIG DESIGN TEMP - 250 F MATERIAL - CARBON STEEL SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE - ASME VIII

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
215.22132	AIR SEPARATORS	<p>QUANTITY -</p> <p>DIMENSIONS - 4 IN DIAMCTER</p> <p>CAPACITY - 300 GPM</p> <p>DESIGN PRESS - 150 PSIG</p> <p>DESIGN TEMP - 250 F</p> <p>MATERIAL - CARBON STEEL</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT - NONE</p> <p>DESIGN CODE -</p>
215.2215	PIPING	
215.22151	2IN + SMALLER	
215.221511	CS/NNS	
215.22152	2.5IN + LARGER	
215.221521	CS/NNS	
215.2216	VALVES	
215.22161	GATE	
215.22162	CHECK	
215.22163	GLOBE	
215.22165	SAFETY/RELIEF	
215.22168	PLUG	
215.22169	SPECIAL VALVES	
215.221691	THREE-WAY	
215.221692	PRESSURE REGULATING	
215.2217	PIPING-MISC. ITEMS	
215.2218		
215.222	ELEC. HEAT SYS.	
215.2222	HEAT TRANSFER EQUIPMENT	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
215.22221	UNIT HEATERS	QUANTITY - 2 TYPE - ELECTRIC HEATING CAPACITY - 40 KW VOLTAGE - 480 V, 3 PH, 60 HZ FAN FLOW RATE 1275 CFM
215.223	GENERAL SUPPLY + EXHAUST	
215.2231	ROTATING MACHINERY	
215.22311	SUPPLY FAN + MOTOR	
215.223111	SUPPLY FAN + MOTOR	QUANTITY - 3 X 50 PCT TYPE - CENTRIFUGAL, CLASS II, BELT DRIVE, SWSI FLOW RATE - 125,000 CFM STATIC PRESS - 5 IN. WATER EFFICIENCY - SAFETY CLASS - NMS SEISMIC CAT. - I DESIGN CODE -
215.223112	SUPPLY FAN MOTOR	TYPE - HORSEPOWER - 125 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
215.22312	EXHAUST FAN + MOTOR	
215.223121	EXHAUST FAN + MOTOR	QUANTITY - 3 X 50 PCT TYPE - CENTRIFUGAL, CLASS II, BELT DRIVE, SWSI FLOW RATE - 60,000 CFM STATIC PRESS - 5 IN. WATER EFFICIENCY - SAFETY CLASS - NNS SEISMIC CAT. - I DESIGN CODE -
215.223122	EXHAUST FAN MOTOR	TYPE - HORSEPOWER - 90 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
215.22313	FILT. ROOM FAN + MOTOR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
215.223131	FILT. ROOM FAN + MOTOR	QUANTITY - 2 X 50 PCT TYPE - POWER ROOF EXHAUST VENTILATORS FLOW RATE - 7200 CFM STATIC PRESS - 0.5 IN. WATER EFFICIENCY - SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
215.223132	FILT. ROOM FAN MOTOR	TYPE - HORSEPOWER - 1.5 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
215.2234	GENERAL FILTRATION EQUIP.	
215.22341	AIR INTAKE FILTERS	QUANTITY - 1 TYPE - AUTOMATIC ROLL FILTER DIMENSIONS - 10 FT X 45 FT (OVERALL) RATING/SIZE EFFICIENCY - 85 PCT DESIGN PRESS - DESIGN TEMP - MATERIAL - FIBERGLASS FILTER BANK CONSISTS OF NINE FILTERS EACH MEASURING 10 FT X 5 FT AND EACH EQUIPPED WITH A 1/6 HP DRIVE (115 V)
215.2235	PIPING + DUCTWORK	
215.22353	DUCTWORK	GALV STL 95,000 180,000
215.2236	VALVES + DAMPERS	
215.22369	SPECIAL VALVES + DAMPERS	
215.223691	PAB INTAKE LOUVER	QUANTITY - 2 TYPE - OPERABLE LOUVER DIMENSIONS - 39 FT WIDE X 8 FT HIGH FLOW RATE - 125,000 CFM VELOCITY - 400 FPM

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
215.223692	FILT RM INTAKE LOUVER	QUANTITY - 2 X 100 PCT TYPE - OPERABLE LOUVER DIMENSIONS - 6 FT WIDE X 4 FT HIGH FLOW RATE - 7200 CFM VELOCITY - 300 FPM
215.223693	NORM VENT EXH FAN DAMPER	QUANTITY - 3 TYPE - OPERABLE LOUVER DIMENSIONS - 30 FT WIDE X 5 FT HIGH FLOW RATE - 60,000 CFM VELOCITY - 400 FPM
215.224	ATM CLEANUP SYSTEM	
215.2241	ROTATING MACHINERY	
215.22411	EXHAUST FAN + MOTOR	
215.224111	EXHAUST FAN	QUANTITY - 2 TYPE - CENTRIFUGAL, CLASS III, DIRECT DRIVE, SWSI FLOW RATE - 76,000 CFM STATIC PRESS - 10 IN. WATER EFFICIENCY - SAFETY CLASS - WNS SEISMIC CAT. - NONE DESIGN CODE -
215.224112	EXHAUST FAN MOTOR	TYPE - HORSEPOWER - 200 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
215.2246	VALVES + DAMPERS	
215.22469	SPECIAL VALVES + DAMPERS	
215.224691	CLEANUP SYS EXHAUST LOUVER	QUANTITY - 1 TYPE - OPERABLE LOUVER DIMENSIONS - 24 FT WIDE X 8 FT HIGH FLOW RATE - 76,000 CFM VELOCITY - 400 FPM
215.2249	SKIDS + FOUNDATIONS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
215.22491	CLEANUP EXH FILTER UNIT	<p>QUANTITY - 1</p> <p>FLOW RATE - 76,000 CFM</p> <p>FILTER PLENUM:</p> <p>SIZE - 50 FT X 24 FT X 8 FT H</p> <p>WEIGHT - 17,000 LB</p> <p>MATERIAL - CARBON STEEL</p> <p>PRE-FILTER:</p> <p>MATERIAL - FIBERGLASS (2 IN. THICK)</p> <p>FLOW/FILTER - 1000 CFM</p> <p>NO. - 78</p> <p>SIZE - 24 IN X 24 IN X 11 IN</p> <p>EFFECIENCY - 30 PCT</p> <p>STATIC DP -</p> <p>MED. FILTER BANK:</p> <p>MATERIAL - FIBERGLASS</p> <p>FLOW/FILTER - 1000 CFM</p> <p>NO. - 78</p> <p>SIZE - 24 IN X 24 IN X 11 IN</p> <p>EFFECIENCY - 85 PCT</p> <p>STATIC DP -</p> <p>HEPA FILTER:</p> <p>MATERIAL - SS FRAMES, ASBESTOS SEPARATORS, GLASS FILTERING MEDIA</p> <p>FLOW/FILTER - 1000 CFM</p> <p>NO. - 156</p> <p>SIZE - 24 IN X 24 IN X 12 IN</p> <p>EFFECIENCY - 99.97 PCT @ 0.3 MICRONS</p> <p>STATIC DP -</p> <p>CHARCOAL FILTERS:</p> <p>TYPE - ACTIVATED CARBON</p> <p>MATERIAL - AUSTENITIC SS FRAME</p> <p>BULK DENSITY - 31 LB/CU FT</p> <p>DEPTH - 2 IN.</p> <p>EFFECIENCY - 99.5 PCT - METHYL IOD. 99.9 PCT - ELEM. IOD.</p> <p>RESIDENCE TIME - 0.25 SEC (MIN)</p> <p>FLOW/FILTER - 333 CFM/TRAY</p> <p>NO. - 234 TRAYS</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT. - NONE</p> <p>DESIGN CODE -</p>
215.225	PUMP ROOM SUPPLY SYSTEM	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
215.2251	ROTATING MACHINERY	
215.22511	SUPPLY FAN + MOTOR	
215.225111	SUPPLY FAN	QUANTITY - 2 TYPE - VANE AXIAL FLOW RATE - 10,000 CFM STATIC PRESS - 1 IN. WATER EFFICIENCY - SAFETY CLASS - 3 SEISMIC CAT. - 1 DESIGN CODE -
215.225112	SUPPLY FAN MOTOR	TYPE - HORSEPOWER - 6 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
215.2256	VALVES + DAMPERS	
215.22569	SPECIAL VALVES + DAMPER	
215.225691	AIR INTAKE LOUVER	QUANTITY - 1 TYPE - LOUVER DIMENSIONS - 12 FT X 5 FT FLOW RATE - 20,000 CFM VELOCITY - 333 FPM
215.225692	FAN INTAKE DAMPER	QUANTITY - 2 TYPE - COUNTER BALANCE DAMPER DIMENSIONS - 66 IN. W X 30 IN. H FLOW RATE - 10,000 CFM VELOCITY -
215.225693	FAN EXHAUST DAMPER	QUANTITY - 2 TYPE - COUNTER BALANCE DAMPER DIMENSIONS - 66 IN. W X 30 IN. H FLOW RATE - 10,000 CFM VELOCITY -
215.228	INSTRUMENTATION + CONTROL	TRANSMITTERS - 4 TEMP ELEMENTS - 2 TEMP TRANSMITTERS - 2 INDICATORS - 6

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
215.23	FIRE PROTECTION	
215.231	HOSE + SPRAY EQUIPMENT	
215.2311	SPRAY HEADS	QUANTITY - 100 SIZE - 1 IN.
215.235	PIPING	
215.2351	2IN + SMALLER	
215.23511	CS/NNS	
215.2352	2.5IN + LARGER	
215.23521	CS/NNS	
215.236	VALVES	
215.2361	GATE	
215.2369	SPECIAL VALVES	
215.23691	DELUGE	
215.237	PIPING - MISC ITEMS	
215.2371	HANGERS + SUPPORTS	
215.24	LIGHTING & SERVICE POWER	
216.	WASTE PROCESS BUILDING	SEE COST ESTIMATE FOR STRUCT QUANTITIES
216.1	BUILDING STRUCTURE	
216.11	EXCAVATION WORK	
216.111	EARTH EXCAVATION	
216.112	ROCK EXCAVATION	
216.113	CONCRETE FILL	
216.114	FILL + BACKFILL	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITFM	DESCRIPTION
216.115		DEWATERING
216.13		SUBSTRUCTURE CONCRETE
216.131		FORMWORK
216.132		REINFORCING STEEL
216.133		CONCRETE
216.134		EMBEDDED STEEL
216.135		FLOOR FINISH
216.136		WATERPROOFING
216.137		CONSTRUCTION JOINTS
216.138		RUBBING CONCRETE SURF.
216.139		WIRE FABRIC
216.14		SUPERSTRUCTURE
216.141		CONCRETE WORK
216.1411		FORMWORK
216.14111		FORMWORK-WOOD
216.14112		FORMWORK-METAL
216.1412		REINF. STEEL
216.1413		CONCRETE
216.1414		EMBEDDED STEEL
216.1415		FLOOR FINISH
216.1416		WATERPROOFING
216.1417		RUBBING CONCRETE SURFACES
216.1418		CONSTRUCTION JOINTS

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
216.1419	REMOVABLE PLUGS	
216.142	STRUCT. + MISC. STEEL	
216.1421	STRUCTURAL STEEL	
216.1423	MISC. FRAMES, ETC.	
216.1425	FLOOR GRATING (GALV.)	
216.1426	STAIR TREADS	
216.1427	HANDRAIL	
216.143	EXTERIOR WALLS	
216.1431	CONCRETE WALLS	
216.1432	MASONRY WALLS	
216.1433	METAL INSUL SIDING	
216.144	ROOF DECK	
216.1441	METAL ROOF DECK	
216.1442	CONCRETE PLANK	
216.1443	CONCRETE FILL	
216.1444	REINFORCING STEEL	
216.145	ROOFING + FLASHING	
216.1451	B.U. ROOF INSUL + FLASH	
216.1452	B.U. ROOF + FLASH (NO INSUL	
216.146	INTERIOR WALLS + PARTITION	
216.1461	CONCRETE WALLS	
216.1462	MASONRY WALLS	
216.1463	METAL PARTITIONS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
216.147	DOORS + WINDOWS	
216.1471	ROLLING STEEL DOORS	
216.1472	PERSONNEL DOORS	
216.1473	SASH + GLAZING	
216.148	WALL, FLR, + CEILING FINIS	
216.1481	ACID PROOF TILES	
216.149	PAINTING	
216.1491	CONCRETE	
216.1492	STEELWORK	
216.1493	METAL DECK	
216.1494	HANDRAIL	
216.2	BUILDING SERVICES	
216.21	PLUMBING + DRAINS	
216.211	ROOF DRAINS + PIPING	
216.2111	DRAINS	QUANTITY - 12 SIZE - 6 IN.
216.2115	PIPING	
216.21152	2.5 IN + LARGER	
216.211521	GALV/NNS	
216.212	FLOOR DRAINS + PIPING	
216.2121	DRAINS	INCLUDED IN LIQUID RADWASTE SYSTEM, ACCOUNT NO. 224.1
216.2125	PIPING	INCLUDED IN LIQUID RADWASTE SYSTEM, ACCOUNT NO. 224.1

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
216.213	EMERGENCY SHOWERS	
216.214	SANITARY DRAINS	
216.22	HEATING, VENT + AIR COND	
216.221	AIR SUPPLY + HEATING SYS	
216.2212	HEAT TRANSFER EQUIPMENT	
216.22121	BORON WASTE CMPT UNIT HTR	<p>QUANTITY - 2 X 100 PCT</p> <p>TYPE - UNITARY FAN COIL UNIT</p> <p>HEATING CAP. -</p> <p>HOT WATER:</p> <p>FLOW RATE -</p> <p>INLET TEMP - 250 F</p> <p>OUTLET TEMP - 210 F</p> <p>DESIGN PRESS -</p> <p>FAN:</p> <p>TYPE -</p> <p>FLOW RATE -</p> <p>STATIC PRESS -</p> <p>SAFETY CLASS -</p> <p>SEISMIC CAT -</p> <p>DESIGN CODE -</p>
216.2215	PIPING + DUCTWORK	
216.22153	DUCTWORK	
216.2219	FOUNDATIONS/SKIDS	
216.22191	AIR SUPPLY UNIT + MOTOR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
216.221911	AIR SUPPLY UNIT	<p>QUANTITY - 2 X 50 PCT TYPE - FAN + HEATER COILS AIR FLOW - 60,000 CFM STATIC PRESS - 4 IN. WATER PREHEAT COIL: AIR IN/OUT - 0 F/50 F STEAM FLOW - 3560 LB/HR STEAM PRESS - 50 PSIG REHEAT COIL: AIR IN/OUT - 50 F/70 F STEAM FLOW - 1420 LB/HR STEAM PRESS - 50 PSIG FILTER SECTION: MATERIAL - FIBERGLASS (THROWAWAY) FLOW/FILTER - QUANTITY - SIZE - 2 IN. THICK EFFICIENCY - STATIC DP - SAFETY CLASS - SEISMIC CAT - DESIGN CODE -</p>
216.221912	AIR SUPPLY UNIT MOTOR	<p>TYPE - HORSEPOWER - 60 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ</p>
216.222	AIR EXHAUST SYSTEM	
216.2221	ROTATING MACHINERY	
216.22211	EXHAUST FAN + MOTOR	
216.222111	EXHAUST FAN	<p>QUANTITY - 2 X 50 PCT TYPE - CENTRIFUGAL, CLASS II, BELT DRIVE, DWO1 FLOW RATE - 60,000 CFM STATIC PRESS - 5 IN. WATER EFFICIENCY - SAFETY CLASS - NNS SEISMIC CAT. - I DESIGN CODE -</p>

EQUIPMENT LIST - REPORT 1

03/29/77

- MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
216.222112	EXHAUST FAN MOTOR	MOTOR TYPE - HORSEPOWER - 75 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
216.2225	PIPING + DUCTWORK	
216.22253	DUCTWORK	
216.2229	FOUNDATIONS/SKIDS	
216.22291	EXHAUST FILTRATION UNIT	QUANTITY - 2 X 50 PCT FLOW RATE - 60,000 CFM FILTER PLENUM: SIZE - 20 FT X 24 FT X 12 FT ARRANGEMENT - 12 FT W X 5 FT H MATERIAL - STEEL PRE-FILTER: MATERIAL - FIBERGLASS (2 IN. TH) FLOW/FILTER - NO. - SIZE - EFFICIENCY - 30 PCT STATIC DP - MEDIUM EFF. FILTER: MATERIAL - FIBERGLASS FLOW/FILTER - 1000 CFM NO. - 60 SIZE - 24 IN X 24 IN X 12 IN EFFICIENCY - 85 PCT STATIC DP - HEPA FILTER: MATERIAL - CADMIUM PLATED STEEL FRAMES, ASBESTOS SEPARATORS, GLASS FILTERING MEDIA FLOW/FILTER - 1000 CFM NO. - 60 SIZE - 24 X 24 X 11.75 IN EFFICIENCY - 99.97 PCT (0.3 MICRON) STATIC DP - SAFETY CLASS - SEISMIC CAT - DESIGN CODE -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN +G AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
216.228	INSTRUMENTATION + CONTROL	ALLOWANCE
216.24	LIGHTING & SERVICE POWER	
216.25	ELEVATOR	
216.251	ELEVATOR EQUIPMENT	<p>QUANTITY - 1</p> <p>TYPE - PASSENGER ELEVATOR</p> <p>RATED TO CARRY FREIGHT</p> <p>TOTAL TRAVEL - 120 FT</p> <p>HOISTWAY AREA - 8 FT X 10 FT</p> <p>SPEED - 125 FPM</p> <p>RATED LOAD - 8000 LB</p> <p>ELEVATOR MACHINERY ROOM LOCATED IN A</p> <p>PENTHOUSE ABOVE THE HOISTWAY</p>
217.	FUEL STORAGE BLDG	SEE COST ESTIMATE FOR STRUCT QUANTITIES
217.1	BLDG STRUCTURE	
217.11	EXCAVATION WORK	
217.111	EARTH EXCAVATION	
217.112	ROCK EXCAVATION	
217.113	CONCRETE FILL	
217.114	FILL + BACKFILL	
217.115	DEWATERING	
217.13	SUBSTRUCTURE CONCRETE	
217.131	FORMWORK	
217.132	REINF. STEEL	
217.133	CONCRETE	
217.134	EMBEDDED STEEL	
217.135	FLOOR FINISH	
217.136	WATERPROOFING	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
217.137	CONSTRUCTION JOINTS	
217.138	WIRE FABRIC	
217.139	STORAGE POOL LINER-S.S.	
217.14	SUPERSTRUCTURE	
217.141	CONCRETE WORK	
217.1411	FORMWORK	
217.14111	FORMWORK-WOOD	
217.14112	FORMWORK-METAL	
217.1412	REINF. STEEL	
217.1413	CONCRETE	
217.1414	EMBEDDED STEEL	
217.1415	FLOOR FINISH	
217.1416	WATERPROOFING	
217.1417	RUBBING CONCRETE SURFACES	
217.1418	CONSTRUCTION JOINTS	
217.142	STRUCT. + MISC. STEEL	
217.1421	STRUCT. STEEL	
217.1423	MISC. FRAMES, ETC.	
217.1425	FLOOR GRATING (GALV.)	
217.1426	STAIR TREADS	
217.1427	HANDRAIL	
217.145	ROOFING + FLASHING	
217.1452	B.U. ROOF+FLASH (NO INSUL)	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
217.147	DOORS + WINDOWS	
217.1471	ROOLING STEEL DOORS	
217.1472	PERSONNEL DOORS	
217.149	PAINTING	
217.1491	CONCRETE	
217.1492	STEELWORK	
217.1493	METAL DECK	
217.1494	HANDRAIL	
217.2	BUILDING SERVICES	
217.21	PLUMBING + DRAINS	
217.211	ROOF DRAINS + PIPING	
217.2111	DRAINS	QUANTITY - 8 SIZE - 6 IN.
217.2115	PIPING	
217.21152	2.5 IN + LARGER	
217.211521	GALV STEEL/NNS	
217.212	FLOOR DRAINS + PIPING	
217.2121	DRAINS	INCLUDED IN LIQUID RADWASTE SYSTEM, ACCOUNT NO. 224.1
217.2125	PIPING	INCLUDED IN LIQUID RADWASTE SYSTEM, ACCOUNT NO. 224.1
217.213	SUMP PUMP + MOTOR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
217.2131	SUMP PUMP	QUANTITY - 2 TYPE - ORIENTATION - FLOW RATE - 50 GPM SPEED - TDH - BHP - NPSH - EFFICIENCY - DESIGN PRESS - DESIGN TEMP - MATERIAL - SAFETY CLASS - SEISMIC CAT. - DESIGN CODE -
217.2132	SUMP PUMP MOTOR	TYPE - HORSEPOWER - 3 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
217.214	SANITARY DRAINS	NONE
217.22	HEATING, VENT, + AIR COND	
217.221	BUILDING HEATING SYSTEM	
217.2211	ROTATING MACHINERY	
217.22111	H.W. CIRC PUMP + MOTOR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
217.221111	H.W. CIRC PUMP	QUANTITY - 1 TYPE - CENTRIFUGAL ORIENTATION - FLOW RATE - 50 GPM SPEED - 1750 RPM TDH - 50 FT BHP - NPSH - EFFICIENCY DESIGN PRESS - DESIGN TEMP - MATERIAL - SAFETY CLASS - NNS SEISMIC CAT. - DESIGN CODE -
217.221112	H.W. CIRC PUMP MOTOR	TYPE - HORSEPOWER - 1 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
217.2212	HEAT TRANSFER EQUIPMENT	
217.22121	H.W. UNIT HEATER	QUANTITY - 10 TYPE - FAN/COIL UNIT HEATING CAP. - 100 MBH HOT WATER: FLOW RATE - 5 GPM INLET TEMP - 250 F OUTLET TEMP - 210 F DESIGN PRESS - FAN: TYPE FLOW RATE - 2250 SCFM INLET TEMP - OUTLET TEMP - STATIC PRESS - FAN MOTOR: TYPE - HORSEPOWER - 0.25 HP SPEED - VOLTAGE 115 V, 1 PHASE, 60 HZ SAFETY CLASS - NNS SEISMIC CAT. - DESIGN CODE -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
217.2215	PIPING	
217.22151	2 IN + SMALLER	
217.221511	CS/NNS	
217.2216	VALVES	
217.22161	GATE	
217.22162	CHECK	
217.22163	GLOBE	
217.22168	PLUG	
217.22169	SPECIAL VALVES	
217.221691	THREE - WAY	
217.2217	PIPING - MISC ITEMS	
217.222	FSB SUPPLY AIR SYS	AIR SUPPLIED FROM PAB HVAC SYSTEM
217.2226	VALVES + DAMPERS	
217.22269	SPECIAL VALVES + DAMPERS	
217.222691	SUPPLY AIR DAMPERS	QUANTITY - 2 X 50 PCT TYPE - MULTILEAF SUPPLY AIR CONTROL AND SHUT-OFF DAMPERS WITH PNEUMATIC OPERATORS DIMENSIONS - 64 IN. W X 40 IN. H FLOW RATE - 27,900 CFM LEAKAGE RATE - 0.42 CFM/SQ FT
217.223	FSB EXHAUST AIR SYSTEM	AIR EXHAUSTED TO PAB HVAC SYSTEM
217.2235	PIPING + DUCTWORK	
217.22353	DUCTWORK	
217.2236	VALVES + DAMPERS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN H3 AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
217.22369	SPECIAL VALVES + DAMPERS	
217.223691	SHUTOFF DAMPERS	<p>QUANTITY - 1 X 100 PCT</p> <p>TYPE - MULTILEAF SHUT-OFF DAMPER WITH PNEUMATIC OPERATOR</p> <p>DIMENSIONS - 80 IN. W X 80 IN. H</p> <p>FLOW RATE - 61,200 CFM</p> <p>LEAKAGE RATE - 0.42 CFM/SQ FT</p>
217.2239	FOUNDATIONS/SKIDS	
217.22391	CLEANUP + EXH UNIT + MOTOR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

217.223911 CLEANUP + EXH UNIT

QUANTITY - 2 X 50 PCT
FLOW RATE - 30,600 CFM
FILTER PLENUM:
SIZE - 26 FT X 22 FT X 8 FT
ARRANGEMENT - 10 FT W X 3 FT H
MATERIAL - STEEL
FAN:
TYPE - CENTRIFUGAL, DIRECT
DRIVE, CLASS III
FLOW RATE - 30,600 CFM
STATIC PRESS - 8 IN. WATER
DEMISTER:
MATERIAL - S.S. WIRE MESH, S.S.
FRAMES
FLOW/CELL - 1000 CFM (NOMINAL)
NO. - 1 BANK, 30 CELLS/BANK
SIZE - 24 IN. X 24 IN.
EFFICIENCY - 99 PCT
HEATING COIL:
TYPE - ELECTRIC
RATING - 100 KW
VOLTAGE - 460 V, 3 PHASE, 60 HZ
HEPA FILTER:
MATERIAL - SS FRAMES, ASBESTOS
SEPARATORS, GLASS
FILTERING MEDIA
FLOW/FILTER - 1000 CFM
NO. - 2 BANKS, 30/BANK
SIZE - 24 X 24 X 11.75 IN.
EFFICIENCY - 99.97 PCT(0.3 MICRON)
CHARCOAL FILTER:
TYPE - ACTIVATED CARBON
MATERIAL - AUSTENITIC SS FRAMES
BULK DENSITY - 31 LB/CU FT
BED DEPTH - 2 IN.
EFFICIENCY - 99.5 PCT (METHYL IOD)
99.9 PCT (ELEM. IOD)
RESIDENCE TIME - 0.25 SEC
FLOW/FILTER - 333 CFM/TRAY(NOMINAL)
NO. - 90 TRAYS
SAFETY CLASS - 3
SEISMIC CAT. - I
DESIGN CODE -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
217.223912	CLEANUP + EXH UNIT MOTOR	TYPE - HORSEPOWER - 75 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
217.228	INSTRUMENTATION + CONTROL	TRANSMITTERS - 18 TEMP ELEMENTS - 9 TEMP TRANSMITTERS - 9 BOARD MOUNTED INDICATORS - 24 MISCELLANEOUS - 6
217.24	LIGHTING & SERVICE POWER	
218A.	CONTROL RM/D-G BUILDING	SEE COST ESTIMATE FOR STRUCT QUANTITIES
218A.1	BUILDING STRUCTURE	
218A.11	EXCAVATION WORK	
218A.111	EARTH EXCAVATION	
218A.112	ROCK EXCAVATION	
218A.113	CONCRETE FILL	
218A.114	FILL + BACKFILL	
218A.115	DEWATERING	
218A.13	SUBSTRUCTURE CONCRETE	
218A.131	FORMWORK	
218A.132	REINF. STEEL	
218A.133	CONCRETE	
218A.134	EMBEDDED STEEL	
218A.135	FLOOR FINISH	
218A.136	WATERPROOFING	
218A.137	CONSTRUCTION JOINTS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218A.138	WIRE FABRIC	
218A.14	SUPERS TRUCTURE	
218A.141	CONCRETE WORK	
218A.1411	FORMWORK	
218A.14111	FORMWORK-WOOD	
218A.14112	FORMWORK-METAL	
218A.1412	REINF. STEEL	
218A.1413	CONCRETE	
218A.1414	EMBEDDED STEEL	
218A.1415	FLOOR FINISH	
218A.1416	WATERPROOFING	
218A.1417	RUBBING CONCRETE SURFACES	
218A.1418	CONSTRUCTION JOINTS	
218A.142	STRUCT. + MISC. STEEL	
218A.1421	STRUCTURAL STEEL	
218A.1422	FLOOR + PLATFORM SUPPORTS	
218A.1423	MISC. FRAMES, ETC.	
218A.1425	FLOOR GRATING (GALV.)	
218A.1426	STAIR TREADS	
218A.1427	HANDRAIL	
218A.143	EXTERIOR WALLS	
218A.1431	CONCRETE WALLS	
218A.145	ROOFING + FLASHING	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218A.1451	B.U. ROOF, INSL. + FLASH	
218A.1452	B.U. ROOF.+FLASH(NO INSUL)	
218A.146	INTERIOR WALLS + PARTITION	
218A.1461	CONCRETE WALLS	
218A.1462	MASONRY WALLS	
218A.1463	METAL PARTITIONS	
218A.1464	GLASS PARTITIONS	
218A.147	DOORS + WINDOWS	
218A.1471	SLIDING DOOR	
218A.1472	PERSONNEL DOORS	
218A.1473	SASH + GLAZING	
218A.148	WALL, FLR, + CEIL. FINISH	
218A.1481	VINYL TILE FLOOR	
218A.1482	SUSPENDED CEILING	
218A.1483	SANDWICH PANELS	
218A.1484	CERAMIC TILE FLOOR	
218A.1485	CERAMIC TILE WALL FINISH	
218A.1486	RAISED FLOOR (COMPUTER RM)	
218A.149	PAINTING	
218A.1491	CONCRETE	
218A.1492	STEELWORK	
218A.1493	METAL DECK	
218A.1494	HANDRAILS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218A.2	BUILDING SERVICES	
218A.21	PLUMBING + DRAINS	
218A.211	ROOF DRAINS + PIPING	
218A.2111	DRAINS	QUANTITY - 6 SIZE - 6 IN MATERIAL - CARBON STEEL
218A.2115	PIPING (ALL 2.5 IN + LGR)	
218A.21152	GALV STEEL/NNS	
218A.212	FLOOR DRAINS + PIPING	
218A.2121	DRAINS	QUANTITY - 24 SIZE - 4 IN MATERIAL - CARBON STEEL
218A.2125	PIPING (ALL 2.5 IN + LGR)	
218A.21252	CI/NNS	
218A.213	PLUMBING + FIXTURES	
218A.2131	FIXTURES	ONE ELECT HOT WTR HEATER ONE ELECT WTR COOLER TWO W.C., TWO URN, TWO LAVS ONE SERVICE SINK ONE CHEMICAL TOILET
218A.2135	PIPING	
218A.21351	2 IN + SMALLER - CS/NNS	
218A.21352	2.5 IN + LARGER - CS/NNS	
218A.214	SUPPLY WATER SYSTEM	
218A.2145	SUPPLY WATER PIPING	
218A.21451	2 IN + SMALLER - COPPER/NNS	
218A.22	HEATING, VENT, + AIR COND	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218A.221	CONTROL ROOM COMPLEX VENT	
218A.2211	ROTATING MACHINERY	
218A.22111	OUTSIDE AIR SUPPLY FAN +MTR	QUANTITY - 2 X 100 PCT FAN: TYPE - CENTRIFUGAL FLOW RATE - 1,150 CFM STATIC PRESS - 12 IN SAFETY CLASS - 3 SEISMIC CAT - I DESIGN CODE - MOTOR: TYPE - AC INDUCTION HORSEPOWER - 5 SPEED - VOLTAGE 460V, 3 PHASE, 60 HZ
218A.22112	EXHAUST FAN + MOTOR	QUANTITY - 1 X 100 PCT FAN: TYPE - AXIAL - IN LINE FLOW RATE - 1,000 CFM STATIC PRESS - 0.5 IN SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE - MOTOR: TYPE AC INDUCTION HORSEPOWER - 0.3 SPEED - VOLTAGE - 115V, 1 PHASE, 60 HZ
218A.2212	HEAT TRANSFER EQUIPMENT	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218A.22121	CONTROL ROOM UNIT HEATERS	<p>QUANTITY -</p> <p>HEATER:</p> <p>TYPE - ELECTRIC</p> <p>KW - 30</p> <p>VOLTAGE 460V, 3 PHASE, 60 HZ</p> <p>FAN:</p> <p>TYPE - CENTRIFUGAL</p> <p>FLOW RATE - 2,200 CFM</p> <p>STATIC PRESS -</p> <p>MOTOR:</p> <p>TYPC - AC INDUCTION</p> <p>HORSEPOWER - 0.25</p> <p>SPEED -</p> <p>VOLTAGE - 115 V, 1 PHASE, 60 HZ</p>
218A.2215	PIPING + DUCTWORK	
218A.22151	2 IN + SMALLER- COPPER/NNS	
218A.22152	2.5 IN + LARGER-COPPER/NNS	
218A.22153	GENERAL DUCTWORK	
218A.22154	EMERG O.A. DUCT - CS/SC 3	
218A.2216	VALVES + DAMPERS	
218A.22169	SHUTOFF DAMPERS	
218A.2217	PIPING - MISC. ITEMS	
218A.2219	SKIDS + FOUNDATIONS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218A.22191	FILTER + CLEANUP UNIT	<p>QUANTITY - 1 X 100 PCT</p> <p>FILTER PLENUM:</p> <p>SIZE -</p> <p>APRANGEMENT -</p> <p>MATERIAL - STEEL</p> <p>PRE-FILTER:</p> <p>MATERIAL - FIBERGLASS</p> <p>FLOW/FILTER - 1,000 CFM</p> <p>NO. - 2</p> <p>SIZE - 24 IN X 24 IN X 2 IN</p> <p>EFFICIENCY - 30 PCT</p> <p>STATIC DP -</p> <p>HEPA FILTER:</p> <p>MATERIAL -</p> <p>FLOW/FILTER - 1,000 CFM</p> <p>NO. - 4</p> <p>SIZE - 24 IN X 24 IN X 12 IN</p> <p>EFFICIENCY - 99.97 PCT</p> <p>STATIC DP -</p> <p>CHARCOAL FILTERS:</p> <p>TYPE - TRAY (3 TRAYS/FILTER)</p> <p>MATERIAL - ACTIVATED CARBON</p> <p>BULK DENSITY - 31 LB/CU FT</p> <p>DEPTH - 2 IN</p> <p>EFFICIENCY - 99 PCT</p> <p>RESIDENCE TIME - 0.25 SEC</p> <p>FLOW/FILTER - 1,000 CFM</p> <p>NO. - 2</p> <p>FAN SECTION:</p> <p>TYPE - AXIAL - IN LINE</p> <p>FLOW RATE - 2,000 CFM</p> <p>STATIC PRESS - 6 IN</p> <p>NO. - 2</p> <p>FAN MOTOR:</p> <p>TYPE - AC INDUCTION</p> <p>HORSEPOWER - 5</p> <p>SPEED -</p> <p>VOLTAGE - 460V, 3 PHASE, 60 HZ</p> <p>DAMPERS:</p> <p>TYPE - MULTILEAF</p> <p>OPERATOR - PNEUMATIC</p> <p>SIZE - 24 IN X 12</p> <p>SAFETY CLASS - 3</p> <p>SEISMIC CAT - I</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

218A.22192 CONT RM A/C + COND UNITS

QUANTITY - 2 X 100 PCT
 AIR COND UNIT:
 REFRIG TONS - 60 TONS
 SENSIBLE HEAT - 648 MBH
 LATENT HEAT - 0.72 MBH
 TYPE - DX - COILS
 HUMIDIFIER:
 TYPE - ELECT + STEAM
 WATER FLOW - 50 LB/HR
 HEATER - 20 KW
 VOLTAGE - 460V, 3PHASE, 60 HZ
 FILTER:
 TYPE - AUTO ROLL - ELEC DRV
 MATERIAL - FIBERGLASS
 EFFICIENCY - 75 PCT
 MTR H.P. - 0.25
 VOLTAGE - 115V, 1PHASE, 60 HZ
 FAN:
 TYPE - CENTRIFUGAL
 FLOW RATE - 24,000 CFM
 STATIC PRESS - 3 IN
 FAN MOTOR:
 TYPE - AC INDUCTION
 HORSEPOWER - 25
 SPEED
 VOLTAGE - 460V, 3 PHASE, 60 HZ
 CONDENSING UNIT:
 DX - AIR COOLED
 HEAT REJECTION - 724 MBH
 COMPRESSOR:
 RATING (KW) - 69 KW
 SUCT TEMP - 45 F
 COND AIR TEMP - 95 F
 FAN SECTION:
 NO. - 6
 TYPE - PROPELLER
 FLOW RATE -
 FAN MOTOR:
 TYPE - AC INDUCTION
 HORSEPOWER - 1
 SPEED -
 FAN/COMPRES VOLTS - 460V, 3 PHASE, 60 HZ
 SAFETY CLASS - 3
 SEISMIC CAT - I

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

218A.22193 COMP RM A/C + COND UNITS

QUANTITY 1 X 100 PCT
AIR COND UNIT:
REFRIG TONS - 7.5 TONS
SENSIBLE HEAT - 81 MBH
LATENT HEAT - 9 MBH
TYPE - DX - COILS
FILTER:
TYPE - HIGH CAPACITY
MATERIAL - FIBERGLASS
EFFICIENCY - 75 PCT
FAN:
TYPE - CENTRIFUGAL
FLOW RATE - 5,300 CFM
STATIC PRESS - 2 IN
FAN MOTOR:
TYPE - AC INDUCTION
HORSEPOWER - 5
SPEED - 5
VOLTAGE - 460V, 3 PHASE, 60 HZ
NO. - 1
CONDENSING UNIT:
TYPE - DX - AIR COOLED
HEAT REJECTION - 92,000 BTU/HR
COMPRESSOR:
RATING (KW) - 8.5 KW
SUCTION TEMP - 45 F
COND AIR TEMP - 95 F
FAN SECTION:
NO - 1
TYPE - PROPELLER
FLOW RATE -
FAN MOTOR:
TYPE - AC INDUCTION
HORSEPOWER - 0.
SPEED -
FAN/COMPRES VOLTS - 460V, 3 PHASE, 60 HZ
SAFETY CLASS - 3
SEISMIC CAT - I

218A.222 EMG SWITCH GEAR RM VENT

218A.2221 ROTATING MACHINERY

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

218A.22211 SUPPLY FAN + MOTOR

QUANTITY - 2 X 100 PCT
FAN SECTION:
TYPE - CENTRIFUGAL/BELT DRV
FLOW RATE - 65,000 CFM
STATIC PRESS - 4 IN
MOTOR:
TYPE - AC INDUCTION
HORSEPOWER - 75
SPEED
VOLTAGE - 460V, 3 PHASE, 60 HZ
SAFETY CLASS - 3
SEISMIC CAT - 1

218A.22212 RETURN AIR FAN + MOTOR

QUANTITY - 2 X 100 PCT
FAN SECTION:
TYPE - CENTRIFUGAL/BELT DRV
FLOW RATE - 55,000 CFM
STATIC PRESS - 4 IN
MOTOR:
TYPE - AC INDUCTION
HORSEPOWER - 60
SPEED -
VOLTAGE - 460V, 3 PHASE, 60 HZ
SAFETY CLASS - 3
SEISMIC CAT - 1

218A.2225 PIPING + DUCTWORK

218A.22253 DUCTWORK

218A.223 CABLE SPREADING AREA VENT

218A.2231 ROTATING MACHINERY

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN H3 AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

218A.22311 SUPPLY FAN + MOTOR

QUANTITY - 1 X 100 PCT
FAN SECTIONS
TYPE - CENTRIFUGAL/BELT DRV
FLOW RATE - 11,500 CFM
STATIC PRESS - 3 IN
MOTOR:
TYPE - AC INDUCTION
HORSEPOWER - 7.5
SPEED -
VOLTAGE - 460V, 3 PHASE, 60 HZ
SAFETY CLASS - 3
SEISMIC CAT - 1

218A.22312 RETURN AIR FAN + MOTOR

QUANTITY - 1 X 100 PCT
FAN SECTION:
TYPE - CENTRIFUGAL/BELT DRV
FLOW RATE -
STATIC PRESS - 11,300 CFM
MOTOR:
TYPE - AC INDUCTION
HORSEPOWER - 7.5
SPEED -
VOLTAGE - 460V, 3 PHASE, 60 HZ
SAFETY CLASS - 3
SEISMIC CAT - 1

218A.2235 PIPING + DUCTWORK

218A.22353 DUCTWORK

218A.224 BATTERY ROOM VENT

218A.2241 ROTATING MACHINERY

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218A.22411	EXHAUST FANS + MOTORS	<p>QUANTITY - 2 X 100 PCT</p> <p>FAN SECTION:</p> <p>TYPE - CENTRIFUGAL</p> <p>FLOW RATE - 12,000 CFM</p> <p>STATIC PRESS - 3 IN</p> <p>MOTOR:</p> <p>TYPE - AC INDUCTION</p> <p>HORSEPOWER - 10</p> <p>SPEED</p> <p>VOLTAGE - 460V, 3 PHASE, 60 HZ</p> <p>SPECIAL CONSTR - SPARK PROOF</p> <p>SAFETY CLASS - 3</p> <p>SEISMIC CAT - I</p>
218A.2242	HEAT TRANSFER EQUIPMENT	
218A.22421	REHEAT COILS	<p>QUANTITY - 2 X 100 PCT</p> <p>TYPE - ELECTRIC</p> <p>SIZE - 48 IN X 24 IN</p> <p>RATING (KW) - 40</p> <p>AIR FLOW - 6,000 CFM</p> <p>VOLTAGE - 460V, 3 PHASE, 60 HZ</p> <p>SAFETY CLASS - 3</p> <p>SEISMIC CAT - I</p>
218A.2245	PIPING + DUCTWORK	
218A.22453	DUCTWORK	
218A.225	ELECTRICAL TUNNEL VENT	
218A.2251	ROTATING MACHINERY	
218A.22511	EXHAUST FAN + MOTOR	<p>QUANTITY - 1 X 100 PCT</p> <p>FAN SECTION:</p> <p>TYPE - AXIAL - IN LINE</p> <p>FLOW RATE - 5,000 CFM</p> <p>STATIC PRESS - 1 IN</p> <p>MOTOR:</p> <p>TYPE - AC INDUCTION</p> <p>HORSEPOWER - 7</p> <p>SPEED -</p> <p>VOLTAGE - 460V, 3 PHASE, 60 HZ</p> <p>SAFETY CLASS - 3</p> <p>SEISMIC CAT - I</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218A.226	DG ROOM VENT	
218A.2261	ROTATING MACHINERY	
218A.22611	SUPPLY FAN + MOTOR	QUANTITY - 2 X 100 PCT FAN SECTION: TYPE - CENTRIF/ DIRECT DRV FLOW RATE - 108,000 CFM STATIC PRESS - 4 IN MOTOR: TYPE - AC INDUCTION HORSEPOWER - 125 SPEED - VOLTAGE - 460V, 3 PHASE, 60 HZ SAFETY CLASS - 3 SEISMIC CAT - I
218A.22612	EXHAUST FAN + MOTOR	QUANTITY - 2 X 100 PCT FAN SECTION: TYPE - AXIAL - IN LINE FLOW RATE - 108,000 CFM STATIC PRESS - 3 IN MOTOR: TYPE - AC INDUCTION HORSEPOWER - 100 SPEED - VOLTAGE - 460V, 3 PHASE, 60 HZ SAFETY CLASS - 3 SEISMI CAT - I
218A.2265	PIPING + DUCTWORK	
218A.22653	DUCTWORK	
218A.227	OUTSIDE AIR INTAKE SYSTEM	
218A.2274	GENERAL FILTER EQUIPMENT	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218A.22741	AUTOMATIC ROLL FILTERS	QUANTITY - 2 X 100 PCT - 6 SECT/EA TYPE - MATERIAL - FIBERGLASS SIZE - 60 FT X 8 FT AIR FLOW - 213,000 CFM EFFICIENCY - 75 PCT DRIVE MOTOR: TYPE - AC INDUCTION NO - 6 HORSEPOWER - 0.1 VOLTAGE - 115V, 1 PHASE, 60 HZ
218A.2276	VALVES + DAMPERS	
218A.22769	AIR INTAKES	QUANTITY - 2 X 100 PCT OPERATOR - MANUAL LOUVERS AIR FLOW - 213,000 CFM CONSTRUCTION - EXTRUDED ALUM - 710 SF STORMPROOF
218A.228	HOT WATER HEATING SYSTEM	
218A.2281	ROTATING MACHINERY	
218A.22811	CIRC PUMPS + MOTOR	QUANTITY - 5 X 25 PCT TYPE - CENTRIFUGAL ORIENTATION - VERTICAL FLOW RATE - 25 GPM SPEED - TDH - 50 FT BHP - 1 NPSH - EFFICIENCY - DESIGN PRESS - 150 PSIG DESIGN TEMP - 250 F MATERIAL - CARBON STEEL SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - MOTOR: TYPE - AC INDUCTION HORSEPOWER - 1 SPEED - VOLTAGE - 460V, 3 PHASE, 60 HZ

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218A.2282	HEAT TRANSFER EQUIPMENT	
218A.22821	STEAM TO H.W. GENERATOR	QUANTITY - 1 X 100 PCT TYPE - STEAM TO WATER CAPACITY - 2,010 MBH STEAM FLOW - 2,200 LB/HR STEAM TEMP - STEAM PRESS - 50 PSIG WATER FLOW - 100 GPM WATER TEMP - 250 F OUT SAFETY CLASS - NNS SEISMIC CAT - NONE
218A.22822	REHEAT COIL -CABLE SPREAD.	QUANTITY - 1 X 100 PCT TYPE - HOT WATER COIL CAPACITY - 610 MBH SIZE - 72 IN X 36 IN WATER FLOW - 30 GPM WATER TEMP - 250 F SAFETY CLASS - NNS SEISMIC CAT - NONE
218A.22823	UNIT HEATERS + MOTOR	QUANTITY - 14 TYPE - HOT WATER COIL CAPACITY - 100 MBH WATER FLOW - 5 GPM WATER TEMP - 250 F FAN SECTION: TYPE - PROPELLER FLOW RATE - 1,850 CFM MOTOR: TYPE - AC INDUCTION HORSEPOWER - 0.2 SPEED - VOLTAGE - 115V, 1 PHASE, 60 HZ SAFETY CLASS - NNS SEISMIC CAT - NONE
218A.2283	TANKS + PRESSURE VESSELS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218A.22831	H.W. EXPANSION TANKS	<p>QUANTITY - 1</p> <p>ORIENTATION - HORIZONTAL</p> <p>DIMENSIONS - 20 IN HIGH X 68 IN LONG</p> <p>VOLUME - 80 GAL</p> <p>DESIGN PRESS - 150 PSIG</p> <p>DESIGN TEMP - 250 F</p> <p>MATERIAL - CARBON STEEL</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT. - NONE</p> <p>DESIGN CODE - ASME VIII</p>
218A.22832	AIR SEPARATORS	<p>QUANTITY - 1</p> <p>SIZE - 3 IN DIAMETER</p> <p>MATERIAL - CARBON STEEL</p> <p>CAPACITY - 100 GPM</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT - NONE</p>
218A.2285	PIPING	
218A.22851	2 IN + SMALLER - CS/NNS	
218A.22852	2.5 IN + LARGER - CS/NNS	
218A.2286	VALVES	
218A.22861	GATE	
218A.22862	CHECK	
218A.22863	GLOBE	
218A.22865	SAFETY RELIEF	
218A.22868	PLUG	
218A.22869	SPECIAL VALVES	
218A.2287	PIPING - MISC ITEMS	
218A.22871	HANGERS	<p>QUANTITY - 3,000 LBS</p> <p>MATERIAL - CARBON STEEL</p>
218A.24	LIGHTING & SERVICE POWER	<p>QUANTITY - 60,000 SF</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218A.28	INSTRUMENTATION + CONTROLS	TRANSMITTERS - 5 EA LOCAL INDICATORS - 1 EA BOARD MOUNTED INDICATORS - 2 EA PROCESS SWITCHES - 35 EA CONTROLLERS - 4 EA CHLORINE DETECTOR - 2 EA FIRE DETECTOR - 4 EA MISCELLANEOUS - 16 EA
218B.	ADMINISTRATION+SERVICE BLDG	SEE COST ESTIMATE FOR STRUCT QUANTITIES
218B.1	BUILDING STRUC.	
218B.11	EXCAVATION WORK	
218B.111	EARTH EXCAVATION	
218B.112	ROCK EXCAVATION	
218B.113	CONCRETE FILL	
218B.114	FILL + BACKFILL	
218B.115	DEWATERING	
218B.13	SUBSTRUCTURE CONCRETE	
218B.131	FORMWORK	
218B.132	REINF. STEEL	
218B.133	CONCRETE	
218B.134	EMBEDDED STEEL	
218B.135	FLOOR FINISH	
218B.136	WATERPROOFING	
218B.137	CONSTRUCTION JOINTS	
218B.138	RUBBING CONCRETE SURF.	
218B.14	SUPERSTRUCTURE	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.141	CONCRETE WORK	
218B.1411	FORMWORK	
218B.14111	FORMWORK-WOOD	
218B.14112	FORMWORK-METAL	
218B.1412	REINF. STEEL	
218B.1413	CONCRETE	
218B.1414	EMBEDDED STEEL	
218B.1415	FLOOR FINISH	
218B.1416	WATERPROOFING	
218B.1417	RUBBING CONCRETE SURFACES	
218B.1418	CONSTRUCTION JOINTS	
218B.142	STRUCT. + MISC. STEEL	
218B.1421	STRUCT. STEEL	
218B.1423	MISC. FRAMES, ETC.	
218B.1425	FLOOR GRATING (GALV.)	
218B.1426	STAIR TREADS	
218B.1427	HANDRAIL	
218B.143	EXTERIOR WALLS	
218B.1431	CONCRETE WALLS	
218B.1432	MASONRY WALLS	
218B.1433	METAL INSULATED SIDING	
218B.1434	WINDOW WALL	
218B.144	ROOF DECK	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.1441	METAL ROOF DECK	
218B.1442	PRECAST CONCRETE PANELS	
218B.1443	CONCRETE FILL	
218B.1444	REINF. STEEL	
218B.145	ROOFING + FLASHING	
218B.1451	B.U. ROOF INSUL+FLASH	
218B.1452	B.U. ROOF+FLASH (NO INSUL)	
218B.146	INTERIOR WALLS + PARTITION	
218B.1461	CONCRETE WALLS	
218B.1462	CONCRETE BLOCK	
218B.1463	METAL PARTITIONS	
218B.1464	PLASTER BD PARTITIONS	
218B.147	DOORS + WINDOWS	
218B.1471	ROLLING STEEL DOORS	
218B.1472	PERSONNEL DOORS	
218B.1473	SASH + GLAZING	
218B.148	WALLS, FLOOR+CEIL. FINISHS	
218B.1481	VINYL FLOOR TILE	
218B.1482	CERAMIC TILE FLOOR	
218B.1483	CARPET	
218B.1484	CERAMIC TILE WALL FINISH	
218B.1485	SUSPENDED CEILING	
218B.149	PAINTING	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.1491	CONCRETE	
218B.1492	STEELWORK	
218B.1493	METAL DECK	
218B.1494	SPECIAL METALLIC PAINT	
218B.1495	HANDRAIL	
218B.1496	EPOXY	
218B.2	BLDG. SERVICES	
218B.21	PLUMBING + DRAINS	
218B.211	ROOF DRAINS + PIPING	
218B.2111	DRAINS	QUANTITY - 12 SIZE - 6 IN.
218B.2115	PIPING (ALL 2.5 IN+LARGER)	
218B.21151	GALV STL/NNS	
218B.212	FLOOR DRAINS + PIPING	
218B.2121	DRAINS	QUANTITY - 24 SIZE - 4 IN.
218B.2125	PIPING (ALL 2.5IN+LARGER)	
218B.21251	CS/NNS	
218B.21252	CI/NNS	
218B.213	PLUMBING FIXTURES + PIPING	
218B.2131	FIXTURES	WATER CLOSETS - 10 URINALS - 6 LAVATORIES - 6 SHOWERS - 10 SERVICE SINKS - 2 KITCHEN SINKS - 1 DRINKING FOUNTAINS - 4

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.2132	DOMESTIC WATER HTRS	QUANTITY - 2 TYPE - ELECTRIC VOLUME - 120 GAL HEATING CAP. - 54 KW VOLTAGE - 480 V, 3 PHASE, 60 HZ RECOVERY CAP. - 110 GAL @ 100 F
218B.2135	PIPING	
218B.21351	2 IN + SMALLER - CS/NNS	
218B.21352	2 IN + SMALLER-COPPER/NNS	
218B.21353	2.5 IN + LARGER - CS/NNS	
218B.22	HVAC	
218B.221	AIR CONDITIONING SYSTEMS	
218B.2219	FOUNDATIONS/SKIDS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

218B_22191 RCA AREA AIR COND UNIT

QUANTITY - 1 X 100 PCT
TYPE -
COOLING COIL:
ARRANGEMENT - 6 ROWS CHILLED WATER
SENSIBLE HEAT - 115 MBH
TOTAL HEAT - 150 MBH
CH. WTR FLOW - 60 GPM
IN/OUT TEMP - 45 F/55 F
PREHEAT COIL:
ARRANGEMENT - 2 ROWS STEAM
HEAT CAP. - 235 MBH
STEAM FLOW - 260 LB/HR
STEAM PRESS - 50 PSIG
REHEAT COIL:
ARRANGEMENT - 2 ROWS HOT WATER
HEAT CAP. - 200 MBH
HOT WTR FLOW - 13 GPM
IN/OUT TEMP - 210 F/180 F
FAN:
TYPE -
FLOW RATE - 4300 CFM
STATIC PRESS - 3.5 IN. WATER
EFFICIENCY -
FAN MOTOR:
TYPE -
HORSEPOWER - 7.5 HP
SPEED -
VOLTAGE - 460 V, 3 PHASE, 60 HZ
FILTER:
TYPE - HIGH CAP. THROWAWAY
MATERIAL - FIBERGLASS(2 IN. TH)
EFFICIENCY - 30 PCF
SAFETY CLASS -
SEISMIC CAT. -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

218B.22192 NON RCA AREA AIR COND UNIT

QUANTITY - 1 X 100 PCT
TYPE - MULTIZONE UNIT
COOLING COIL:
ARRANGEMENT - 6 ROWS CHILLED WATER
SENSIBLE HEAT - 580 MBH
TOTAL HEAT - 1150 MBH
CH. WTR FLOW - 230 GPM
IN/OUT TEMP - 45 F/55 F
PREHEAT COIL:
ARRANGEMENT -
HEAT CAP. -
STEAM FLOW - 910 LB/HR
STEAM PRESS - 50 PSIG
REHEAT COIL:
ARRANGEMENT - 2 ROWS HOT WATER
HEAT CAP. - 650 MBH
HOT WTR FLOW - 43 GPM
IN/OUT TEMP - 210 F/180 F
FAN:
TYPE -
FLOW RATE - 15,300 CFM
STATIC PRESS - 3.5 IN. WATER
EFFICIENCY -
FAN MOTOR:
TYPE -
HORSEPOWER - 20 HP
SPEED
VOLTAGE - 460 V, 3 PHASE, 60 HZ
FILTER:
TYPE - HIGH CAP. THROWAWAY
MATERIAL - FIBERGLASS(2 IN. TH)
EFFICIENCY - 30 PCT
SAFETY CLASS -
SEISMIC CAT. -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

218B.22193 ADMIN. OFF. AIR COND UNIT

QUANTITY - 1 X 100 PCT
TYPE -
COOLING COIL:
ARRANGEMENT - 6 ROWS CHILLED WATER
SENSIBLE HEAT - 539 MBH
TOTAL HEAT - 576 MBH
CH. WTR FLOW - 130 GPM
IN/OUT TEMP - 45 F/55 F
REHEAT COIL:
ARRANGEMENT - 2 ROWS HOT WATER
HEAT CAP. - 660 MBH
HOT WTR FLOW - 44 GPM
IN/OUT TEMP - 210 F/180 F
FAN:
TYPE -
FLOW RATE - 20,100 CFM
STATIC PRESS - 3 IN. WATER
EFFICIENCY -
FAN MOTOR:
TYPE -
HORSEPOWER - 25 HP
SPEED -
VOLTAGE - 460 V, 3 PHASE, 60 HZ
FILTER:
TYPE - HIGH CAP. THROWAWAY
MATERIAL - FIBERGLASS(2 IN. TH)
EFFICIENCY - 30 PCT
SAFETY CLASS -
SEISMIC CAT. -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.22194	Q.A. STORES AIR COND UNIT	<p>QUANTITY - 1 X 100 PCT</p> <p>TYPE -</p> <p>COOLING COIL:</p> <p>ARRANGEMENT - 4 ROWS CHILLED WATER</p> <p>SENSIBLE HEAT - 37 MBH</p> <p>TOTAL HEAT - 50 MBH</p> <p>CH. WTR FLOW - 1.5 GPM</p> <p>IN/OUT TEMP - 45 F/55 F</p> <p>PREHEAT COIL:</p> <p>ARRANGEMENT - 2 ROWS STEAM</p> <p>HEAT CAP. - 110 MBH</p> <p>STEAM FLOW - 120 LB/HR</p> <p>STEAM PRESS - 50 PSIG</p> <p>REHEAT COIL:</p> <p>ARRANGEMENT - 2 ROWS HOT WATER</p> <p>HEAT CAP. - 105 MBH</p> <p>HOT WTR FLOW - 7 GPM</p> <p>IN/OUT TEMP - 210 F/180 F</p> <p>FAN:</p> <p>TYPE -</p> <p>FLOW RATE - 2000 CFM</p> <p>STATIC PRESS - 2.75 IN. WATER</p> <p>EFFICIENCY -</p> <p>FAN MOTOR:</p> <p>TYPE -</p> <p>HORSEPOWER - 2 HP</p> <p>SPEED -</p> <p>VOLTAGE - 450 V, 3 PHASE, 60 HZ</p> <p>FILTER:</p> <p>TYPE - HIGH CAP. THROWAWAY</p> <p>MATERIAL - FIBERGLASS(2 IN. TH)</p> <p>EFFICIENCY - 30 PCT</p> <p>SAFETY CLASS -</p> <p>SEISMIC CAT. -</p>
218B.222	SUPPLY AIP SYSTEM	
218B.2229	SKIDS + FOUNDATIONS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.22291	LOCKER ROOM SUPPLY UNIT	<p>QUANTITY - 1 X 100 PCT</p> <p>TYPE -</p> <p>PREHEAT COIL:</p> <p>ARRANGEMENT - 2 ROWS STEAM</p> <p>HEAT CAP. - 500 MBH</p> <p>STEAM FLOW - 550 LB/HR</p> <p>STEAM PRESS - 50 PSIG</p> <p>REHEAT COIL:</p> <p>ARRANGEMENT - 2 ROWS HOT WATER</p> <p>HEAT CAP. - 350 MBH</p> <p>HOT WTR FLOW - 23 GPM</p> <p>IN/OUT TEMP - 210 F/180 F</p> <p>FAN:</p> <p>TYPE -</p> <p>FLOW RATE - 9200 CFM</p> <p>STATIC PRESS - 3 IN. WATER</p> <p>EFFICIENCY -</p> <p>FAN MOTOR:</p> <p>TYPE -</p> <p>HORSEPOWER - 10 HP</p> <p>SPEED -</p> <p>VOLTAGE - 460 V, 3 PHASE, 60 HZ</p> <p>FILTER:</p> <p>TYPE - HIGH CAP. THROWAWAY</p> <p>MATERIAL - FIBERGLASS(2 IN. TH)</p> <p>EFFICIENCY - 30 PCT</p> <p>SAFETY CLASS -</p> <p>SEISMIC CAT. -</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.22292	LAB.SUPPLY UNIT	<p>QUANTITY - 1 X 100 PCT TYPE - AIR TEMPERING UNIT HEATING UNIT: TYPE - STEAM COIL - INTEGRAL FACE + BYPASS DAMPERS HEAT CAP.- 385 MBH STEAM FLOW - 425 LB/HR STEAM PRESS - 50 PSIG FAN: T:PF - FLOW RATE - 5100 CFM STATIC PRESS - 3 IN. WATER EFFICIENCY - FAN MOTOR: TYPE - HORSEPOWER - 7.5 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ FILTER: TYPE - HIGH CAP. THROWAWAY MATERIAL - FIBERGLASS(2 IN. TH) EFFICIENCY - 30 PCT SAFETY CLASS - SEISMIC CAT. -</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

218B.22293 STORE RM SUPPLY UNIT

QUANTITY - 1 X 100 PCT
TYPE -
PREHEAT COIL:
ARRANGEMENT - 2 ROWS STEAM
HEAT CAP. - 934 MBH
STEAM FLOW - 1025 LB/HR
STEAM PRESS - 50 PSIG
REHEAT COIL:
ARRANGEMENT - 2 ROWS HOT WATER
HEAT CAP. - 560 MBH
HOT WTR FLOW - 37 GPM
IN/OUT TEMP - 210 F/180 F
FAN:
TYPE -
FLOW RATE - 17,300 CFM
STATIC PRESS - 3 IN. WATER
EFFICIENCY -
FAN MOTOR:
TYPE -
HORSEPOWER - 20 HP
SPEED -
VOLTAGE - 460 V, 3 PHASE, 60 HZ
FILTER:
TYPE - HIGH CAP. THROWAWAY
MATERIAL - FIBERGLASS(2 IN. TH)
EFFICIENCY - 30 PCT
SAFETY CLASS -
SEISMIC CAT. -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 M&E/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

218B.22294 AUX BOILER RM SUPPLY UNIT

QUANTITY - 1 X 100 PCT
TYPE - AIR TEMPERING UNIT
HEATING UNIT:
TYPE - STEAM COIL - INTEGRAL
FACE + BYPASS DAMPERS
HEAT CAP. - 950 MBH
STEAM FLOW - 1045 LB/HR
STEAM PRESS - 50 PSIG
AIR RISE - 70 F
FAN:
TYPE -
FLOW RATE - 11,000 CFM
STATIC PRESS - 3 IN. WATER
EFFICIENCY -
FAN MOTOR:
TYPE -
HORSEPOWER - 15 HP
SPEED -
VOLTAGE - 460 V, 3 PHASE, 60 HZ
FILTER:
TYPE - HIGH CAP. THROWAWAY
MATERIAL - FIBERGLASS (2 IN. TH)
EFFICIENCY - 30 PCT
SAFETY CLASS -
SEISMIC CAT. -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

218B.22295 BOILER COMBUSTION AIR SUP

QUANTITY - 1 X 100 PCT
TYPE - AIR TEMPERING UNIT
HEATING UNIT:
TYPE - STEAM COIL - INTEGRAL
FACE + BYPASS DAMPERS
HEAT CAP. - 2600 MBH
STEAM FLOW - 2860 LB/HR
STEAM PRESS - 50 PSIG
AIR RISE - 70 F
FAN:
TYPE -
FLOW RATE - 35,000 CFM
STATIC PRESS - 3 IN. WATER
EFFICIENCY -
FAN MOTOR:
TYPE -
HORSEPOWER - 30 HP
SPEED -
VOLTAGE - 460 V, 3 PHASE, 60 HZ
FILTER:
TYPE - HIGH CAP. THROWAWAY
MATERIAL - FIBERGLASS(2 IN. TH)
EFFICIENCY - 30 PCT
SAFETY CLASS -
SEISMIC CAT. -

218B.223 EXHAUST AIR SYSTEM

218B.2231 ROTATING MACHINERY

218B.22311 GEN. EXHAUST FANS + MOTOR

QUANTITY - 2 X 50 PCT
TYPE - CENTRIFUGAL, CLASS III,
SWS1
FLOW RATE - 16,500 CFM
STATIC PRESS - 6 IN. WATER
EFFICIENCY -
SAFETY CLASS -
SEISMIC CAT. -
DESIGN CODE -
MOTOR TYPE -
HORSEPOWER - 25 HP
SPEED -
VOLTAGE - 460 V, 3 PHASE, 60 HZ

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.22312	HOOD EXHAUST FANS + MOTOR	<p>QUANTITY - 3 X 100 PCT TYPE - CENTRIFUGAL, CLASS II, SWS1 FLOW RATE - 2100 CFM STATIC PRESS - 5 IN. WATER EFFICIENCY - SAFETY CLASS - SEISMIC CAT. - DESIGN CODE - MOTOR TYPE - HORSEPOWER - 3 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ</p>
218B.22313	SHOP EXHAUST FANS + MOTOR	<p>QUANTITY - 1 X 100 PCT TYPE - CENTRIFUGAL, CLASS I, SWS1 FLOW RATE - 300 CFM STATIC PRESS - 3 IN. WATER EFFICIENCY - SAFETY CLASS - SEISMIC CAT. - DESIGN CODE - MOTOR TYPE - HORSEPOWER - 3 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.22314	MISC.SPACE EXH FANS+MOTORS	<p>QUANTITY - 13</p> <p>TYPE: 3 - CENTRIFUGAL 3 - VANE AXIAL 7 - ROOF VENTS</p> <p>CENTRIFUGAL FANS: 2 - 1600 CFM @ 3 IN.WTR, 2 HP 1 - 1500 CFM @ 2 IN. WTR, 1.5 HP</p> <p>VANE AXIAL FANS: 1 - 11,800 CFM @ 1.5 IN.WTR, 5 HP 1 - 8,100 CFM @ 1.5 IN.WTR, 5 HP 1 - 18,200 CFM @ 1.5 IN.WTR, 10 HP</p> <p>ROOF VENTS: 1 - 6000 CFM @ 0.50 IN.WTR, 2 HP 1 - 3000 CFM @ 0.50 IN.WTR, 1 HP 1 - 5200 CFM @ 0.50 IN.WTR, 1.5 HP 1 - 3100 CFM @ 0.50 IN.WTR, 1 HP 1 - 900 CFM @ 0.25 IN.WTR, 0.167 HP 1 - 975 CFM @ 0.50 IN.WTR, 0.25 HP 1 - 50 CFM @ 0.05 IN.WTR, 0.05 HP</p> <p>VOLTAGE: ALL FANS EXCEPT 2 ROOF VENTS - 460 V, 3 PHASE, 60 HZ 50 CFM & 900 CFM ROOF VENTS - 115 V, 1 PHASE, 60 HZ</p>
218B.22315	AUX BOILER RM EXH FAN +MTR	<p>QUANTITY - 2</p> <p>TYPE - AXIAL TYPE ROOF VENT</p> <p>FLOW RATE - 10,000 CFM</p> <p>STATIC PRESS - 0.5 IN. WATER</p> <p>EFFICIENCY -</p> <p>SAFETY CLASS -</p> <p>SEISMIC CAT. -</p> <p>DESIGN CODE -</p> <p>MOTOR TYPE -</p> <p>HORSEPOWER - 5 HP</p> <p>SPEED -</p> <p>VOLTAGE - 460 V, 3 PHASE, 60 HZ</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.22316	AUX BOIL RM SUMMER EXH FAN	QUANTITY - 1 TYPE - AXIAL TYPE ROOF VENT FLOW RATE - 5000 CFM STATIC PRESS - 0.5 IN. WATER EFFICIENCY - SAFETY CLASS - SEISMIC CAT. - DESIGN CODE - MOTOR TYPE - HORSEPOWER - 1.5 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
218B.22317	AUX BOIL WTR TR RM EXH FAN	QUANTITY - 1 TYPE - AXIAL TYPE ROOF VENT FLOW RATE - 6500 CFM STATIC PRESS - 0.75 IN. WATER EFFICIENCY - SAFETY CLASS - SEISMIC CAT. - DESIGN CODE - MOTOR TYPE - HORSEPOWER - 2 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
218B.2239	FOUNDATIONS/SKIDS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.22391	GEN EXHAUST FILTER UNIT	<p>QUANTITY - 1 X 100 PCT</p> <p>TYPE -</p> <p>FILTER PLENUM:</p> <p>SIZE - 16 FT X 12 FT X 8 FT</p> <p>ARRANGEMENT -</p> <p>MATERIAL - STEEL</p> <p>ROUGHING FILTER:</p> <p>ARRANGEMENT -</p> <p>SIZE - 5 FT W X 3 FT H</p> <p>NO. - 24 X 24 X 12 IN.</p> <p>FLOW/FILTER -</p> <p>EFFICIENCY - 85 PCT</p> <p>MATERIAL -</p> <p>HEPA FILTER:</p> <p>ARRANGEMENT - 5 FT W X 3 FT H</p> <p>SIZE - 24 X 24 X 11.75 IN.</p> <p>NO. -</p> <p>FLOW/FILTER -</p> <p>EFFICIENCY - 99.97 PCT(0.3 MICRON)</p> <p>MATERIAL - S.S. FRAMES, ASBESTOS SEPARATORS, GLASS FILTERING MEDIA</p>
218B.22392	HOOD EXHAUST FILTER UNIT	<p>QUANTITY - 3 X 100 PCT</p> <p>TYPE -</p> <p>FILTER PLENUM:</p> <p>SIZE - 7 FT X 4 FT X 2 FT H</p> <p>ARRANGEMENT -</p> <p>MATERIAL - STAINLESS STEEL</p> <p>ROUGHING FILTER:</p> <p>ARRANGEMENT -</p> <p>SIZE -</p> <p>NO. -</p> <p>FLOW/FILTER -</p> <p>EFFICIENCY - 30 PCT</p> <p>MATERIAL - FIBERGLASS(2 IN. TH)</p> <p>HEPA FILTER:</p> <p>ARRANGEMENT -</p> <p>SIZE -</p> <p>NO. -</p> <p>FLOW/FILTER -</p> <p>EFFICIENCY - 99.97 PCT(0.3 MICRON)</p> <p>MATERIAL - S.S. FRAMES, ASBESTOS SEPARATORS, GLASS FILTERING MEDIA</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.22393	SHOP EXHAUST FILTER UNIT	<p>QUANTITY - 1 X 100 PCT</p> <p>TYPE -</p> <p>FILTER PLENUM:</p> <p>SIZE - 7 FT X 4 FT X 4 FT H</p> <p>ARRANGEMENT -</p> <p>MATERIAL - STAINLESS STEEL</p> <p>ROUGHING FILTER:</p> <p>ARRANGEMENT -</p> <p>SIZE -</p> <p>NO. -</p> <p>FLOW/FILTER -</p> <p>EFFICIENCY - 30 PCT</p> <p>MATERIAL - FIBERGLASS(2 IN, TH)</p> <p>HEPA FILTER:</p> <p>ARRANGEMENT -</p> <p>SIZE -</p> <p>NO. -</p> <p>FLOW/FILTER -</p> <p>EFFICIENCY - 99.97 PCT(0.3 MICRON)</p> <p>MATERIAL - S.S. FRAMES, ASBESTOS SEPARATORS, GLASS FILTERING MEDIA</p>
218B.224	REFRIG. CHILLED WTR SYS	
218B.2241	ROTATING MACHINERY	
218B.22411	CHILLER	<p>QUANTITY - 1</p> <p>TYPE - HERMETIC, CENTRIFUGAL</p> <p>REFRIG. TONS - 200</p> <p>FLOW:</p> <p>CHILL WTR - 480 GPM</p> <p>CIRC WTR - 580 GPM</p> <p>TEMPERATURE:</p> <p>CHILL WTR - 55/45 F IN/OUT</p> <p>CIRC WTR - 85/95 F IN/OUT</p> <p>HORSEPOWER - 250 HP</p> <p>VOLTAGE - 460 V, 3 PHASE, 60 HZ</p> <p>SAFETY CLASS -</p> <p>SEISMIC CAT. -</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.22412	CHILLED WATER PUMP + MOTOR	TYPE - HORSEPOWER - 15 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ SPEED - 1,750 RPM TDH - 75 FT BHP - NPSH - EFFICIENCY - DESIGN PRESS - DESIGN TEMP - MATERIAL - SAFETY CLASS - SEISMIC CAT. - DESIGN CODE -
218B.22413	CONDENSER CIRC PUMP + MTR	TYPE - HORSEPOWER - 20 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ SPEED - 1,750 RPM TDH - 70 FT BHP - NPSH - EFFICIENCY - DESIGN PRESS - DESIGN TEMP - MATERIAL - SAFETY CLASS - SEISMIC CAT. - DESIGN CODE -
218B.2242	HEAT TRANSFER EQUIPMENT	
218B.22421	COOLING TOWER	QUANTITY - 1 HEAT REJECTION - 2,880 COND WATER: IN/OUT - 95/85 F FLOW - 576 AIR TEMP - 95 DB 78 F FANS: QUANTITY - 2 HORSEPOWER - 15 HP VOLTAGE - 460 V, 3 PHASE, 60HZ

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.2245	PIPING	
218B.22451	2 IN + SMALLER - CS/NNS	
218B.22452	2.5 IN + LARGER - CS/NNS	
218B.2246	VALVES	
218B.22461	GATE	
218B.22462	CHECK	
218B.22463	GLOBE	
218B.22465	SAFETY/RELIEF	
218B.22468	PLUG	
218B.22469	SPECIAL VALVES	
218B.2247	PIPING-MISC. ITEMS	
218B.22471	HANGERS	
218B.225	BUILDING HEATING SYSTEMS	
218B.2251	ROTATING MACHINERY	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.22511	PRI.H.W. CIRC PUMP	<p> QUANTITY - 1 X 100 PCT TYPE - CENTRIFUGAL ORIENTATION - VERTICAL FLOW RATE - 2230 GPM SPEED - 1750 RPM TDH - 30 FT BHP - NPSH - EFFICIENCY - DESIGN PRESS - 150 PSIG DESIGN TEMP - 250 F MATERIAL - CARBON STEEL SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - MOTOR: TYPE - AC INDUCTION HORSEPOWER - 5 SPEED - 1750 RPM VOLTAGE - 460V, 3 PHASE, 60 HZ </p>
218B.22512	RCA REHEAT CIRC PUMP	<p> QUANTITY - 1 X 100 PCT TYPE - CENTRIFUGAL ORIENTATION - VERTICAL - IN LINE FLOW RATE - 13 GPM SPEED - TDH - 15 FT BHP - NPSH - EFFICIENCY - DESIGN PRESS - 150 PSIG DESIGN TEMP - 250 F MATERIAL - CARBON STEEL SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - MOTOR: TYPE - AC INDUCTION HORSEPOWER - 0.25 SPEED - VOLTAGE - 115V, 1 PHASE, 60 HZ </p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

218B.22513 NON-RCA REHEAT CIRC PUMP

QUANTITY - 1 X 100 PCT
 TYPE - CENTRIFUGAL
 ORIENTATION - VERTICAL - IN LINE
 FLOW RATE - 43 GPM
 SPEED -
 TDH - 15 FT
 BHP -
 NPSH -
 EFFICIENCY -
 DESIGN PRESS - 150 PSIG
 DESIGN TEMP - 250 F
 MATERIAL - CARBON STEEL
 SAFETY CLASS - NNS
 SEISMIC CAT. - NONE
 DESIGN CODE -
 MOTOR:
 TYPE - AC INDUCTION
 HORSEPOWER - 0.33
 SPEED -
 VOLTAGE 115V, 1 PHASE, 60 HZ

218B.22514 ADMIN OFF REHEAT CIRC PUMP

QUANTITY - 1 X 100 PCT
 TYPE - CENTRIFUGAL
 ORIENTATION - VERTICAL - IN LINE
 FLOW RATE - 44 GPM
 SPEED -
 TDH - 15 FT
 BHP -
 NPSH -
 EFFICIENCY -
 DESIGN PRESS - 150 PSIG
 DESIGN TEMP - 250 F
 MATERIAL - CARBON STEEL
 SAFETY CLASS - NNS
 SEISMIC CAT. - NONE
 DESIGN CODE -
 MOTOR:
 TYPE - AC INDUCTION
 HORSEPOWER - 0.33
 SPEED -
 VOLTAGE 115V, 1 PHASE, 60 HZ

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

218B.22515 QA STORES REHEAT CIRC PUMP

QUANTITY - 1 X 100 PCT
TYPE - CENTRIFUGAL
ORIENTATION - VERTICAL - IN LINE
FLOW RATE - 7 GPM
SPEED -
TDH - 10 FT
BHP -
NPSH -
EFFICIENCY -
DESIGN PRESS - 150 PSIG
DESIGN TEMP - 250 F
MATERIAL - CARBON STEEL
SAFETY CLASS - NNS
SEISMIC CAT. - NONE
DESIGN CODE -
MOTOR:
TYPE - AC INDUCTION
HORSEPOWER - 0.25
SPEED -
VOLTAGE - 115V, 1 PHASE, 60 HZ

218B.22516 LOCK ROOM REHEAT CIRC PUMP

FLOW RATE - 23 GPM
SPEED -
TDH - 15 FT
BHP -
NPSH -
EFFICIENCY -
DESIGN PRESS - 150 PSIG
DESIGN TEMP - 250 F
MATERIAL - CARBON STEEL
SAFETY CLASS - NNS
SEISMIC CAT. - NONE
DESIGN CODE -
MOTOR:
TYPE - AC INDUCTION
HORSEPOWER - 0.33
SPEED -
VOLTAGE - 115V, 1 PHASE, 60 HZ

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
2188.22517	UNIT HEATER LOOP CIRC PUMP	QUANTITY - 1 X 100 PCT TYPE - CENTRIFUGAL ORIENTATION - VERTICAL - IN LINE FLOW RATE - 60 GPM SPEED - 1750 RPM TDH - 50 FT BHP - NPSH - EFFICIENCY - DESIGN PRESS - 150 PSIG DESIGN TEMP - 250 F MATERIAL - CARBON STEEL SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - MOTOR: TYPE - AC INDUCTION HORSEPOWER - 2 SPEED - 1800 RPM VOLTAGE - 460V, 3 PHASE, 60 HZ
2188.22518	STOREROOM REHEAT CIRC PUMP	QUANTITY - 1 X 100 PCT TYPE - CENTRIFUGAL ORIENTATION - VERTICAL - IN LINE FLOW RATE - 37 GPM SPEED - TDH - 15 FT BHP - NPSH - EFFICIENCY - DESIGN PRESS - 150 PSIG DESIGN TEMP - 250 F MATERIAL - CARBON STEEL SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - MOTOR: TYPE - AC INDUCTION HORSEPOWER - 0.33 SPEED - VOLTAGE - 115V, 1 PHASE, 60 HZ

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA - COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.22519	AUX BOIL RM CIRC PUMPS	<p>QUANTITY - 2</p> <p>PUMP NO. 1:</p> <p>TYPE - CENTRIFUGAL -</p> <p>ORIENTATION - VERTICAL - IN LINE</p> <p>FLOW RATE - 54 GPM</p> <p>SPEED -</p> <p>TDH - 10 FT</p> <p>BHP -</p> <p>NPSH -</p> <p>EFFICIENCY -</p> <p>DESIGN PRESS - 150 PSIG</p> <p>DESIGN TEMP - 250 F</p> <p>MATERIAL - CARBON STEEL</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT - NONE</p> <p>DESIGN CODE -</p> <p>MOTOR:</p> <p>TYPE - AC INDUCTION</p> <p>HORSEPOWER - 0.2</p> <p>SPEED -</p> <p>VOLTAGE - 115V, 1 PHASE, 60 HZ</p> <p>PUMP NO. 2:</p> <p>TYPE - CENTRIFUGAL</p> <p>ORIENTATION - VERTICAL - IN LINE</p> <p>FLOW RATE - 20 GPM</p> <p>SPEED -</p> <p>TDH - 10 FT</p> <p>BHP -</p> <p>NPSH -</p> <p>EFFICIENCY -</p> <p>DESIGN PRESS - 150 PSIG</p> <p>DESIGN TEMP - 250 F</p> <p>MATERIAL - CARBON STEEL</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT - NONE</p> <p>DESIGN CODE -</p> <p>MOTOR:</p> <p>TYPE - AC INDUCTION</p> <p>HORSEPOWER - 0.2</p> <p>SPEED -</p> <p>VOLTAGE - 115V, 1 PHASE, 60 HZ</p>
218B.2252	HEAT TRANSFER EQUIPMENT	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

218B.22521 STEAM TO H.W. HEAT EX

QUANTITY - 1 X 100 PCT
TYPE - SHELL + TUBE
WATER FLOW - 210 GPM
STEAM FLOW 3800 LB/HR
STEAM PRESS 50 PSIG
STEAM TEMP:
IN - SATURATED AT 50 PSIG
OUT -
WATER TEMP:
IN - 180 F
OUT - 210 F
DESIGN TEMP:
SHELL - 250 F
TUBE - 250 F
DESIGN PRESS:
SHELL - 150 PSIG
TUBE - 150 PSIG
MATERIAL - CARBON STEEL
SAFETY CLASS - NNS
SEISMIC CAT - NONE
DESIGN CODE -

218B.22522 GEN.BLDG UNIT HEATERS

QUANTITY - 14
TYPE - HOT WATER COIL
CAPACITY - 75 MBH
WATER FLOW - 5 GPM
WATER TEMP:
IN - 210 F
OUT - 180 F
FAN SECTION:
TYPE - PROPELLER
FLOW RATE - 2,500 CFM
FAN MOTOR:
TYPE - AC INDUCTION
HORSEPOWER - 0.2
SPEED -
VOLTAGE - 115V, 1 PHASE, 60 HZ
SAFETY CLASS - NNS
SEISMIC CAT - NONE
DESIGN CODE -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.22523	AUX BOIL RM UNIT HTR/ONE	<p>QUANTITY - 1</p> <p>TYPE - HOT WATER COIL</p> <p>CAPACITY - 90 MBH</p> <p>WATER FLOW - 4 GPM</p> <p>WATER TEMP:</p> <p>IN - 210 F</p> <p>OUT - 180 F</p> <p>FAN SECTION:</p> <p>TYPE - PROPELLER</p> <p>FLOW RATE - 3,000 CFM</p> <p>FAN MOTOR:</p> <p>TYPE - AC INDUCTION</p> <p>HORSEPOWER - 0.2</p> <p>SPEED -</p> <p>VOLTAGE - 115V, 1 PHASE, 60 HZ</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT - NONE</p> <p>DESIGN CODE -</p>
218B.22524	AUX BOIL RM UNIT HTR/TWO	<p>QUANTITY - 1</p> <p>TYPE - HOT WATER COIL</p> <p>CAPACITY - 52 MBH</p> <p>WATER FLOW - 2.5 GPM</p> <p>WATER TEMP:</p> <p>IN - 210 F</p> <p>OUT - 180 F</p> <p>FAN SECTION:</p> <p>TYPE - PROPELLER</p> <p>FLOW RATE - 1,600 CFM</p> <p>FAN MOTOR:</p> <p>TYPE - AC INDUCTION</p> <p>HORSEPOWER - 0.2</p> <p>SPEED -</p> <p>VOLTAGE - 115V, 1 PHASE, 60 HZ</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT - NONE</p> <p>DESIGN CODE -</p>
218B.2253	TANKS + PRESSURE VESSELS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.22531	H.W. EXPANSION TANK	QUANTITY - 1 ORIENTATION - HORIZONTAL DIMENSIONS - 30 IN HIGH X 60 IN LONG VOLUME - 166 GAL DESIGN PRESS - 150 PSIG DESIGN TEMP - 250 F MATERIAL - CARBON STEEL SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
218B.22532	AIR SEPARATOR	QUANTITY - 1 SIZE - 4 IN DIAMETER CAPACITY - 300 GPM MATERIAL - CARBON STEEL DESIGN PRESS - 150 PSIG DESIGN TEMP - 250 F SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE - ASME VIII
218B.2255	PIPING	
218B.22551	2 IN + SMALLER - CS/NNS	
218B.22552	2.5 IN + LARGER - CS/NNS	
218B.2256	VALVES	
218B.22561	GATE	
218B.22562	CHECK	
218B.22563	GLOBE	
218B.22565	SAFETY/RELIEF	
218B.22568	PLUG	
218B.22569	SPECIAL VALVES	
218B.2257	PIPING - MISC ITEMS	
218B.22571	HANGERS	MATERIAL - CARBON STEEL

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218B.226	DUCTWORK	
218B.228	INSTRUMENTATION & CONTROL	ALLOWANCE
218B.23	FIRE PROTECTION	
218B.231	FIRE HOSE CABINETS	
218B.232	SPRINKLERS	
218B.24	LIGHTING & SERVICE POWER	
218B.25	ELEVATOR	
218B.251	ELEVATOR EQUIPMENT	QUANTITY - 1 ELEVATOR TYPE - PASSENGER TRAVEL - 40 FT HOISTWAY AREA- 7 FT X 7 FT SPEED - 100 FT/MIN RATED LOAD - 4000 LBS
218D.	FIRE PUMP HOUSE, INC FNDTNS	SEE COST ESTIMATE FOR STRUCT QUANTITIES
218D.1	BLDG. STRUC.	
218D.11	EARTH WORK	
218D.111	EARTH EXCAVATION	
218D.112	ROCK EXCAVATION	
218D.113	CONCRETE FILL	
218D.114	FILL + BACKFILL	
218D.115	DEWATERING	
218D.13	SUBSTRUCTURE CONCRETE	
218D.131	FORMWORK	
218D.132	REINF. STEEL	
218D.133	CONCRETE	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218D.134	EMBEDDED STEEL	
218D.135	FLOOR FINISH	
218D.14	SUPERSTRUCTURE	
218D.141	CONCRETE WORK	
218D.1411	FORMWORK	
218D.1412	REINF. STEEL	
218D.1413	CONCRETE	
218D.142	STRUCT. + MISC. STEEL	
218D.1421	STRUCT. STEEL	
218D.1423	MISC. FRAMES, ETC.	
218D.143	EXTERIOR WALLS	
218D.1433	METAL INSUL. SIDING	
218D.144	ROOF DECK	
218D.1441	METAL ROOF DECK	
218D.145	ROOF. + FLASHING	
218D.1451	B.U. ROOF, INSUL. + FLASH	
218D.146	INT. WALLS + PARTIT.	
218D.1462	MASONRY WALLS	
218D.1463	PARTITIONS	
218D.147	DOORS + WINDOWS	
218D.1471	ROLLING STEEL DOORS	
218D.1472	PERSONNEL DOORS	
218D.1473	SASH + GLAZING	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218D.149	PAINTING	
218D.1491	CONCRETE	
218D.1492	STEELWORK	
218D.1493	METAL DECK	
218D.2	BUILDING SERVICES	
218D.21	PLUMBING + DRAINS	
218D.211	ROOF DRAINS + PIPING	
218D.2111	DRAINS	QUANTITY - 2 SIZE - 6 IN
218D.2115	PIPING (ALL 2.5 IN + LGR)	
218D.21152	GALV STEEL/NNS	
218D.212	FLOOR DRAINS + PIPING	
218D.2121	DRAINS	QUANTITY - 4 SIZE - 2 IN QUANTITY - 6 SIZE - 4 IN
218D.2125	PIPING	
218D.21251	2 IN + SMALLER - CI/NNS	
218D.21252	2.5 IN + LARGER - CI/NNS	
218D.2127	PIPING - MISC ITEMS	
218D.21271	HANGERS	
218D.22	HEATING, VENT, + AIR COND	
218D.221	ROTATING MACHINERY	
218D.2211	ROOF VENTILATORS + MOTOR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218D.22111	ROOF VENTILATOR	QUANTITY - 2 X 50 PCT TYPE - FLOW RATE - 2,500 CFM S.P. - 0.5 IN SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE -
218D.22112	ROOF VENTILATOR MOTOR	TYPE - HORSEPOWER - 0.5 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
218D.222	HEAT TRANSFER EQUIPMENT	
218D.2221	UNIT HEATER + MOTOR	
218D.22211	UNIT HEATER	QUANTITY - 3 X 33 PCT HEAT RATE - 75 MBH STEAM: PRESSURE - 50 PSIG FLOW - 82 LB/HR FAN: FLOW - 1,570 CFM S.P. - SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE -
218D.22212	UNIT HEATER MOTOR	TYPE - HORSEPOWER - 1/15 HP SPEED - VOLTAGE - 115 V, 1 PHASE, 60 HZ
218D.225	PIPING	
218D.2251	2 IN + SMALLER	
218D.22511	CS/NNS	
218D.226	VALVES + DAMPERS	
218D.2261	GATE	
218D.2263	GLOBE	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218D.2269	SPECIAL VALVES + DAMPERS	
218D.22691	INTAKE LOUVERS	QUANTITY - 4 X 25 PCT TYPE - FLOW - 1,250 CFM SIZE - 48 IN X 18 IN MATERIAL - EXTRUDED ALUMINUM SAFETY CLASS - NNS SEISMIC CAT - NONE
218D.227	PIPING - MISC ITEMS	
218D.228	INSTRUMENTATION & CONTROL	ALLOWANCE
218D.24	LIGHTING & SERVICE POWER	
218E.	EMERGENCY FEED PUMP BLDG	SEE COST ESTIMATE FOR STRUCT QUANTITIES
218E.1	BLDG. STRUCTURE	
218E.11	EXCAVATION WORK	
218E.111	EARTH EXCAVATION	
218E.112	ROCK EXCAVATION	
218E.113	CONCRETE FILL	
218E.114	FILL + BACKFILL	
218E.115	DEWATERING	
218E.13	SUBSTRUCTURE CONCRETE	
218E.131	FORMWORK	
218E.132	REBAR	
218E.133	CONCRETE	
218E.134	EMBEDDED STEEL	
218E.135	FLOOR FINISH	
218E.136	WATERPROOFING	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218E.137	CONSTRUCTION JOINTS	
218E.138	WIRE FABRIC	
218E.14	SUPERSTRUCTURE	
218E.141	CONCRETE WORK	
218E.1411	FORMWORK	
218E.14111	FORMWORK-WOOD	
218E.14112	FORMWORK-METAL	
218E.1412	REINF. STEEL	
218E.1413	CONCRETE	
218E.1414	EMBEDDED STEEL	
218E.1415	FLOOR FINISH	
218E.1416	WATERPROFFING	
218E.1417	RUBBING CONCRETE SURFACES	
218E.1418	CONSTRUCTION JOINTS	
218E.142	STRUCT + MISC. STEEL	
218E.1421	STRUCTURAL STEEL	
218E.1423	MISC. FRAMES, ETC.	
218E.1425	FLOOR GRATING (GALV)	
218E.1426	STAIR TREADS	
218E.1427	HANDRAIL	
218E.143	EXTERIOR WALLS	
218E.1431	CONCRETE	
218E.1433	METAL INSUL SIDING	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218E.145	ROOFING + FLASHING	
218E.1451	B.U. ROOF, INSUL + FLASH	
218E.1452	B.U. ROOF + FLASH (NO INSUL	
218E.147	DOORS + WINDOWS	
218E.1471	ROLLING STEEL DOORS	
218E.1472	PERSONNEL DOORS	
218E.1473	SASH + GLAZING	
218E.149	PAINTING	
218E.1491	CONCRETE	
218E.1492	STEELWORK	
218E.1493	METAL DECK	
218E.1494	HANDRAIL	
218E.2	BUILDING SERVICES	
218E.21	PLUMBING + DRAINS	
218E.211	ROOF DRAINS + PIPING	
218E.2111	DRAINS	QUANTITY - 2 SIZE - 6 IN
218E.2115	PIPING (ALL 2.5 IN + LRG)	
218E.21151	GALV STEEL/NNS	
218E.212	FLOOR DRAINS + PIPING	
218E.2121	DRAINS	QUANTITY - 2 SIZE - 3 IN QUANTITY - 12 SIZE - 4 IN
218E.2125	PIPING (ALL 2.5 IN + LRG)	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218E.21251	CI/NNS	
218E.21252	CS/NNS	
218E.22	HEATING, VENT, + AIR COND	
218E.221	ROTATING MACHINERY	
218E.2211	ROOF VENTILATORS + MOTOR	
218E.22111	ROOF VENTILATOR	QUANTITY - 2 X 50 PCT TYPE - AXIAL FAN FLOW RATE - 25,000 CFM S.P. - 0.5 IN SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE -
218E.22112	ROOF VENTILATOR MOTOR	TYPE - HORSEPOWER - 5 HP SPEED - VOLTAGE - 460 V, 3 PH, 60 HZ
218E.222	HEAT TRANSFER EQUIPMENT	
218E.2221	STEAM UNIT HEATER + MOTOR	
218E.22211	STEAM UNIT HEATER	QUANTITY - 2 HEAT RATE - 100 MBH STEAM: PRESSURE - 50 PSIG FLOW - 110 LB/HR FAN: FLOW - 2,100 CFM S.P. - SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE -
218E.22212	STEAM UNIT HEATER MOTOR	TYPE - HORSEPOWER - 0.5 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
218E.225	PIPING	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218E.2251	2IN + SMALLER	
218E.22511	CS/NNS	
218E.226	VALVES + DAMPERS	
218E.2261	GATE	
218E.2269	SPECIAL VALVES + DAMPERS	
218E.22691	INTAKE LOUVERS	QUANTITY - 2 TYPE - FLOW - 25,000 CFM SIZE - 172 IN W X 60 IN H MATERIAL - EXTRUDED ALUMINUM SAFETY CLASS - NNS SEISMIC CAT - NONE
218E.227	PIPING-MISC. ITEMS	
218E.2271	HANGERS + SUPPORTS	
218E.228	INSTRUMENTATION & CONTROL	ALLOWANCE
218E.24	LIGHTING & SERVICE POWER	
218F.	MANWAY TUNNELS (RCA TUNLS)	SEE COST ESTIMATE FOR STRUCT QUANTITIES
218F.1	BUILDING STRUCTURE	
218F.11	EXCAVATION	
218F.111	EARTH EXCAVATION	
218F.112	ROCK EXCAVATION	
218F.113	CONCRETE FILL	
218F.114	FILL + BACKFILL	
218F.115	DEWATERING	
218F.13	SUBSTRUCTURE CONCRETE	
218F.131	FORMWORK	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218F.132	REINF. STEEL	
218F.133	CONCRETE	
218F.134	EMBEDDED STEEL	
218F.135	FLOOR FINISH	
218F.136	WATERPROOFING	
218F.137	RUBBING CONCRETE SURFACES	
218F.138	CONSTRUCTION JOINTS	
218F.139	WIRE FABRIC	
218F.14	SUPERSTRUCTURE	
218F.141	CONCRETE WORK	
218F.1411	FORMWORK	
218F.14111	FORMWORK-WOOD	
218F.14112	FORMWORK-METAL	
218F.1412	REINFORCING STEEL	
218F.1413	CONCRETE	
218F.1414	EMBEDDED STEEL	
218F.1415	FLOOR FINISH	
218F.1416	WATERPROOFING	
218F.1417	RUBBING CONCRETE SURFACES	
218F.1418	CONSTRUCTION JOINTS	
218F.142	STRUCTURAL+MISC.STEEL	
218F.1421	STRUCTURAL STEEL	
218F.149	PAINTING	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218F.1491	CONCRETE	
218F.1492	STEELWORK	
218F.1493	METAL DECK	
218F.2	BUILDING SERVICES	
218F.21	PLUMBING + DRAINS	
218F.211	FLOOR DRAINS + PIPING	
218F.2111	DRAINS	QUANTITY - 6 SIZE - 4 IN
218F.2115	PIPING (ALL 2.5 IN + LRG)	
218F.21151	CI/NNS	
218F.24	LIGHTING & SERVICE POWER	
218G.	ELEC. TUNNELS	SEE COST ESTIMATE FOR STRUCT QUANTITIES
218G.1	BLD.STRUC.(INCL.ACCT218E)	
218G.2	BUILDING SERVICES	
218G.21	PLUMBING + DRAINS	
218G.211	FLOOR DRAINS + PIPING	
218G.2111	DRAINS	QUANTITY - 12 SIZE - 4 IN
218G.2115	PIPING (ALL 2.5 IN + LGR)	
218G.21151	CI/NNS	
218G.24	LIGHTING & SERVICE POWER	
218H.	NON-ESSEN. SWGR BLDG.	SEE COST ESTIMATE FOR STRUCT QUANTITIES
218H.1	BLDG. STRUCT.	
218H.11	EXCAVATION WORK	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN 4G AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218H.111	EARTH EXCAVATION	
218H.112	ROCK EXCAVATION	
218H.113	CONCRETE FILL	
218H.114	FILL + BACKFILL	
218H.115	DEWATERING	
218H.13	SUBSTRUCTURE CONCRETE	
218H.131	FORMWORK	
218H.132	REINF. STEEL	
218H.133	CONCRETE	
218H.134	EMBEDDED STEEL	
218H.135	FLOOR FINISH	
218H.136	WATERPROOFING	
218H.137	CONSTRUCTION JOINTS	
218H.138	WIRE FABRIC	
218H.14	SUPERSTRUCTURE	
218H.141	CONCRETE WORK	
218H.1411	FORMWORK	
218H.14111	FORMWORK-WOOD	
218H.14112	FORMWORK-METAL	
218H.1412	REINF. STEEL	
218H.1413	CONCRETE	
218H.1414	EMBEDDED STEEL	
218H.1415	FLOOR FINISH	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218H.1416	WATERPROOFING	
218H.1417	RUBBING CONCRETE SURFACES	
218H.1418	CONSTRUCTION JOINTS	
218H.142	STRUCT + MISC. STEEL	
218H.1421	STRUCT. STEEL	
218H.1423	MISC. FRAMES, ETC.	
218H.1425	FLOOR GRATING (GALV.)	
218H.1426	STAIR TREADS	
218H.1427	HANDRAIL	
218H.143	EXTERIOR WALLS	
218H.1431	CONCRETE WALLS	
218H.1432	MASONRY WALLS	
218H.1433	METAL INSUL SIDING	
218H.144	ROOF DECK	
218H.1442	CONCRETE PLANK	
218H.1443	CONCRETE FILL	
218H.1444	REINF. STEEL	
218H.145	ROOFING & FLASHING	
218H.1452	B.U.ROOF+FLASH(NO INSUL.)	
218H.146	INTERIOR WALLS & PARTITION	
218H.1461	CONCRETE WALLS	
218H.1463	METAL PARTITIONS	
218H.147	DOORS + WINDOWS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218H.1472	PERSONNEL DOORS	
218H.1473	SASH & GLAZING	
218H.149	PAINTING	
218H.1491	CONCRETE	
218H.1492	STEEL WORK	
218H.1493	METAL DECK	
218H.1494	HANDRAIL	
218H.2	BUILDING SERVICES	
218H.22	HEATING, VENT, + AIR COND	
218H.221	ROTATING MACHINERY	
218H.2211	PROPELLER FAN + MOTOR	
218H.22111	PROPELLER FAN	QUANTITY - 3 X 50 PCT TYPE - WALL TYPE WITH GRAVITY SHUTTERS FLOW RATE - 11,630 CFM S.P. - 1 IN SAFETY CLASS - WNS SEISMIC CAT - NONE DESIGN CODE -
218H.22112	PROPELLER FAN MOTOR	TYPE - HORSEPOWER - 5 HP SPEED - VOLTAGE - 460 V, 3 PH, 60 HZ
218H.222	HEAT TRANSFER EQUIPMENT	
218H.2221	ELECTRIC UNIT HEATER + MTR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218H.22211	ELECTRIC UNIT HEATER	<p>QUANTITY - 2 X 50 PCT</p> <p>HEAT ELEMENTS: NUMBER -</p> <p>POWER - 24 KW</p> <p>VOLTAGE - 460 V, 3 PHASE, 60 HZ</p> <p>FAN: FLOW - 1,860 CFM</p> <p>S.P. -</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT - NONE</p> <p>DESIGN CODE -</p>
218H.22212	ELECTRIC UNIT HTR MOTOR	<p>TYPE -</p> <p>HORSEPOWER - 0.25 HP</p> <p>SPEED -</p> <p>VOLTAGE - 115 V, 1 PHASE, 60 HZ</p>
218H.224	GEN FILTRATION EQUIPMENT	
218H.2241	ROLL FILTER + MOTOR	
218H.22411	ROLL FILTER	<p>QUANTITY - 1</p> <p>TYPE - AUTOMATIC ROLL TYPE</p> <p>SIZE - 10 FT W X 7 FT H</p> <p>FLOW - 23,260 CFM</p> <p>FILTER MEDIA - FIBERGLASS</p> <p>EFFICIENCY - 75 PCT</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT - NONE</p> <p>DESIGN CODE -</p>
218H.22412	ROLL FILTER MOTOR	<p>TYPE -</p> <p>HORSEPOWER - 1/6 HP</p> <p>SPEED -</p> <p>VOLTAGE - 115 V, 1 PHASE, 60 HZ</p>
218H.226	VALVES + DAMPERS	
218H.2269	SPECIAL VALVES + DAMPERS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218H.22691	INTAKE LOUVERS	QUANTITY - 1 TYPE - FLOW - 23,260 CFM SIZE - 12 FT W X 6 IN H MATERIAL - EXTRUDED ALUMINUM SAFETY CLASS - NNS SEISMIC CAT - NONE
218H.22692	ROOF VENTILATOR	QUANTITY - 2 X 50 PCT TYPE - GRAVITY ROOF VENT FLOW RATE - 11,130 CFM TEMP DIFF - 10 F STACK HEIGHT - 15 FT SAFETY CLASS - NNS SEISMIC CAT - NONE
218H.24	LIGHTING & SERVICE POWER	
218H.28	INSTRUMENTATION + CONTROL	ALLOWANCE
218J.	MN STEAM + FW PIPE ENC.	SEE COST ESTIMATE FOR STRUCT QUANTITIES
218J.1	BLDG. STRUCT.	
218J.11	EXCAVATION WORK	
218J.111	EARTH EXCAVATION	
218J.112	ROCK EXCAVATION	
218J.113	CONCRETE FILL	
218J.114	FILL + BACKFILL	
218J.115	DEWATERING	
218J.13	SUBSTRUCTURE CONCRETE	
218J.131	FORMWORK	
218J.132	REINF. STEEL	
218J.133	CONCRETE	
218J.134	EMBEDDED STEEL	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218J.135	FLOOR FINISH	
218J.136	WATERPROOFING	
218J.137	CONSTRUCTION JOINTS	
218J.138	RUBBING CONCRETE SURFACES	
218J.139	WIRE FABRIC	
218J.14	SUPERSTRUCTURE	
218J.141	CONCRETE WORK	
218J.1411	FORMWORK	
218J.14111	FORMWORK-WOOD	
218J.14112	FORMWORK-METAL	
218J.1412	REINF. STEEL	
218J.1413	CONCRETE	
218J.1414	EMBEDDED STEEL	
218J.1415	FLOOR FINISH	
218J.1416	WATERPROOFING	
218J.1417	RUBBING CONCRETE SURFACES	
218J.1418	CONSTRUCTION JOINTS	
218J.142	STRUCT + MISC. STEEL	
218J.1421	STRUCT STEEL	
218J.1423	MISC. FRAMES, ETC.	
218J.1425	FLOOR GRATING (GALV)	
218J.1426	STAIR TREADS	
218J.1427	HAND RAIL	

EQUIPMENT LIST - REPORT 1

05/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218J.145	ROOFING + FLASHING	
218J.1452	B.U.ROOF+FLASH(NO INSUL.)	
218J.146	INTERIORWALLS+PARTITIONS	
218J.1461	CONCRETE WALLS	
218J.1463	METAL PARTITIONS (SEAL PLA	
218J.147	DOORS + WINDOWS	
218J.1472	PERSONNEL DOORS	
218J.1473	SASH + GLAZING	
218J.149	PAINTING	
218J.1491	CONCRETE	
218J.1492	STEELWORK	
218J.1493	METAL DECK	
218J.1494	HANDRAIL	
218J.2	BLDG. SERV.	
218J.22	HEATING, VENT, + AIR COND	
218J.221	ROTATING MACHINERY	
218J.2211	SUPPLY FAN + MOTOR	
218J.22111	SUPPLY FAN	QUANTITY - 2 X 100 PCT TYPE - IN-LINE AXIAL FLOW RATE - 11,000 CFM S.P. - 1.5 IN SAFETY CLASS - NWS SEISMIC CAT - I DESIGN CODE -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218J.22112	SUPPLY FAN MOTOR	TYPE - HORSEPOWER - 7.5 HP SPEED - VOLTAGE - 460 V, 3 PH, 60 HZ
218J.225	PIPING + DUCTWORK	
218J.2253	DUCTWORK	QUANTITY - 200 SQ FT WEIGHT - 250 LB MATERIAL - GALV STEEL
218J.24	LIGHTING & SERVICE POWER	
218K.	PIPE TUNNELS	SEE COST ESTIMATE FOR STRUCT QUANTITIES
218K.1	BLDG. STRUCT	
218K.11	EXCAVATION WORK	
218K.111	EARTH EXCAVATION	
218K.112	ROCK EXCAVATION	
218K.113	CONCRETE FILL	
218K.114	FILL + BACKFILL	
218K.115	DEWATERING	
218K.13	SUBSTRUCTURE CONCRETE	
218K.131	FORMWORK	
218K.132	REINF. STEEL	
218K.133	CONCRETE	
218K.134	EMBEDDED STEEL	
218K.135	FLOOR FINISH	
218K.136	WATERPROOFING	
218K.137	CONSTRUCTION JOINTS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218K.138	RUBBING CONCRETE SURFACES	
218K.139	WIRE FABRIC	
218K.14	SUPERSTRUCTURE	
218K.141	CONCRETE WORK	
218K.1411	FORMWORK	
218K.14111	FORMWORK-WOOD	
218K.14112	FORMWORK-METAL	
218K.1412	REINFORCING STEEL	
218K.1413	CONCRETE	
218K.1414	EMBEDDED STEEL	
218K.1415	FLOOR FINISH	
218K.1416	WATERPROOFING	
218K.1417	RUBBING CONCRETE SURFACES	
218K.1418	CONSTRUCTION JOINTS	
218K.142	STRUCTURAL+MISC. STEEL	
218K.1421	STRUCTURAL STEEL	
218K.149	PAINTING	
218K.1491	CONCRETE	
218K.1492	STEELWORK	
218K.1493	METAL DECK	
218K.2	BLDG. SERV.	
218K.21	DRAINS + PIPING	ALLOWANCE
218K.24	LIGHTING + SERVICE POWER	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218M.	HYDROGEN RECOMBINER STRUCT	SEE COST ESTIMATE FOR STRUCT QUANTITIES
218M.1	BLDG. STRUCTURES	
218M.11	EXCAVATION WORK	
218M.111	EARTH EXCAVATION	
218M.112	ROCK EXCAVATION	
218M.113	CONCRETE FILL	
218M.114	FILL + BACKFILL	
218M.115	DEWATERING	
218M.13	SUBSTRUCTURE CONCRETE	
218M.131	FORMWORK	
218M.132	REINF. STEEL	
218M.133	CONCRETE	
218M.134	EMBEDDED STEEL	
218M.135	FLOOR FINISH	
218M.136	WATERPROOFING	
218M.137	CONSTRUCTION JOINTS	
218M.138	RUBBING CONCRETE SURFACES	
218M.139	WIRE FABRIC	
218M.14	SUPERSTRUCTURE	
218M.141	CONCRETE WORK	
218M.1411	FORMWORK	
218M.14111	FORMWORK-WOOD	
218M.14112	FORMWORK-METAL	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218M.1412	REINF. STEEL	
218M.1413	CONCRETE	
218M.1414	EMBEDDED STEEL	
218M.1415	FLOOR FINISH	
218M.1416	WATERPROOFING	
218M.1417	RUBBING CONCRETE SURFACES	
218M.1418	CONSTRUCTION JOINTS	
218M.142	STRUCT + MISC STEEL	
218M.1421	STRUCT. STEEL	
218M.1423	MISC. FRAMES, ETC.	
218M.145	ROOFING & FLASHING	
218M.1451	B.U. ROOF & FLASH (NO INSUL)	
218M.149	PAINTING	
218M.1491	CONCRETE	
218M.1492	STEELWORK	
218M.1493	METAL DECK	
218M.2	BUILDING SERVICES	
218M.24	LIGHTING + SERVICE POWER	
218P.	CONTAIN EQ HATCH MSLE SHLD	SEE COST ESTIMATE FOR STRUCT QUANTITIES
218P.1	SHIELD STRUCTURE	
218P.13	SUBSTRUCTURE CONCRETE	
218P.14	SUPERSTRUCTURE	
218P.141	CONCRETE WORK	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218P.1411	FORMWORK	
218P.14111	FORMWORK-WOOD	
218P.14112	FORMWORK-METAL	
218P.1412	REINF. STEEL	
218P.1413	CONCRETE	
218P.1414	EMBEDDED STEEL	
218P.1417	RUBBING CONCRETE SURFACES	
218P.1418	CONSTRUCTION JOINTS	
218S.	HOLDING POND	SEE COST ESTIMATE FOR STRUCT QUANTITIES
218S.1	POND STRUCTURE	
218S.11	EXCAVATION WORK	
218S.111	EARTH EXCAVATION	
218S.112	ROCK EXCAVATION	
218S.113	CONCRETE FILL	
218S.114	FILL + BACKFILL	
218S.115	PUMPING	
218S.13	SUBSTRUCTURE CONCRETE	
218S.131	FORMWORK	
218S.132	REINF. STEEL	
218S.133	CONCRETE	
218S.134	EMBEDDED STEEL	
218S.135	FLOOR FINISH	
218S.136	WATERPROOFING	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218S.137	CONSTRUCTION JOINTS	
218S.138	RUBBING CONCRETE SURFACES	
218S.139	WATERSTOPS	
218T.	ULTIMATE HEAT SINK STRUCT	SEE COST ESTIMATE FOR STRUCT QUANTITIES
218T.1	BLDG. STRUCT	
218T.11	EXCAVATION WORK	
218T.111	EARTH EXCAVATION	
218T.112	ROCK EXCAVATION	
218T.113	CONCRETE FILL	
218T.114	FILL + BACKFILL	
218T.115	DEWATERING	
218T.13	SUBSTRUCTURE CONCRETE	
218T.131	FORMWORK	
218T.132	REINF. STEEL	
218T.133	CONCRETE	
218T.134	EMBEDDED STEEL	
218T.135	FLOOR FINISH	
218T.136	WATERPROOFING	
218T.137	CONSTRUCTION JOINTS	
218T.138	WIRE FABRIC	
218T.139	WATERSTOP	
218T.14	SUPERSTRUCTURE	
218T.141	CONCRETE WORK	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218T.1411	FORMWORK	
218T.14111	FORMWORK-WOOD	
218T.14112	FORMWORK-METAL	
218T.1412	REINF. STEEL	
218T.1413	CONCRETE	
218T.1414	EMBEDDED STEEL	
218T.1415	FLOOR FINISH	
218T.1416	WATERPROOFING	
218T.1417	RUBBING CONCRETE SURFACES	
218T.1418	CONSTRUCTION JOINTS	
218T.142	STRUCT + MISC. STEEL	
218T.1421	STRUCT STEEL	
218T.1423	MISC. FRAMES, ETC.	
218T.1425	FLOOR GRATING (GALV.)	
218T.1426	STAIR TREADS	
218T.1427	HANDRAIL	
218T.143	EXTERIOR WALLS	
218T.1431	CONCRETE WALLS	
218T.1432	MASONRY WALLS	
218T.145	ROOFING + FLASHING	
218T.1452	BU ROOF + FLASH (NO INSUL)	
218T.146	INTERIOR WALLS + PARTITION	
218T.1461	CONCRETE WALLS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218T.1462	MASONRY WALLS	
218T.1463	PARTITIONS	
218T.147	DOORS + WINDOWS	
218T.1472	PERSONNEL DOORS	
218T.1473	SASH + GLAZING	
218T.149	PAINTING	
218T.1491	CONCRETE (WATERSEALING)	
218T.1492	STEELWORK	
218T.1493	METAL DECK	
218T.1494	HANDRAIL	
218T.2	BUILDING SERVICES	
218T.21	PLUMBING & DRAINS	
218T.211	FLOOR DRAINS & PIPING	
218T.22	HEATING, VENT + AIR COND	TWO INDEPENDENT TRAINS EACH CONSISTING OF ONE-HALF THE FOLLOWING EQUIPMENT
218T.221	ROTATING MACHINERY	
218T.2211	MECH EQUIPT RM FAN + MOTOR	
218T.22111	MECH EQUIPT RM FAN	QUANTITY - 2 X 100 PCT TYPE - ROOF EXHAUST FLOW RATE - 10,000 CFM S.P. - 0.75 IN SAFETY CLASS - SEISMIC CAT - DESIGN CODE -
218T.22112	MECH EQUIPT RM FAN MOTOR	TYPE - HORSEPOWER - 3 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218T.2212	SWITCHGEAR RM FAN + MOTOR	
218T.22121	SWITCHGEAR RM FAN	QUANTITY - 2 X 100 PCT TYPE - CENTRIFUGAL FLOW RATE - 6,000 CFM S.P. - 2 IN SAFETY CLASS - NNS SEISMIC CAT - I DESIGN CODE -
218T.22122	SWITCHGEAR RM FAN MOTOR	TYPE - HORSEPOWER - 5 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
218T.222	HEAT TRANSFER EQUIPMENT	
218T.2221	SW GR RM ELEC HEATER + MTR	
218T.22211	SW GR RM ELEC HEATER	QUANTITY - 4 HEAT ELEMENTS: NUMBER - POWER - 12 KW VOLTAGE - 460 V, 3 PHASE, 60 HZ FAN: FLOW - 735 CFM S.P. - SAFETY CLASS - SEISMIC CAT - DESIGN CODE -
218T.22212	SW GR RM ELEC HTR MOTOR	TYPE - HORSEPOWER - 0.25 HP SPEED - VOLTAGE - 415 V, 1 PHASE, 60 HZ
218T.224	GEN FILTRATION EQUIPMENT	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218T.2241	ROLL FILTER	QUANTITY - 1 TYPE - MANUAL ROLL SIZE - 12 FT W X 7 FT H FLOW - FILTER MEDIA - FIBERGLASS EFFICIENCY - 75 PCT SAFETY CLASS - SEISMIC CAT - DESIGN CODE - FILTER PLENUM: QUANTITY - 1 SIZE - 14 FT H X 6 FT L X 9 FT H MATERIAL - SHEET METAL
218T.226	VALVES + DAMPERS	
218T.2269	SPECIAL VALVES + DAMPERS	
218T.22691	M.E.R. INTAKE LOUVER	QUANTITY - 1 TYPE - INTAKE FLOW - 32,000 CFM SIZE - 12 FT W X 8 FT H MATERIAL - SAFETY CLASS - SEISMIC CAT -
218T.22692	SWITCHGR RM EXH LOUVER	QUANTITY - 2 TYPE - EXHAUST WITH COUNTER BALANCE RELIEF DAMPER FLOW - 6,000 CFM SIZE - 4 FT L X 3 FT H MATERIAL - SAFETY CLASS - SEISMIC CAT -
218T.228	INSTRUMENTATION + CONTROL	ALLOWANCE
218T.24	LIGHTING + SERVICE POWER	
218V.	CONTR RM EMG AIR INTK STR	SEE COST ESTIMATE FOR STRUCT QUANTITIES
218V.1	BLDG. STRUCTURE	
218V.11	EXCAVATION WORK	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218V.111	EARTH EXCAVATION	
218V.112	ROCK EXCAVATION	
218V.113	CONCRETE FILL	
218V.114	FILL & BACKFILL	
218V.115	PUMPING	
218V.116	CHAIN LINK FENCE (7' HIGH)	
218V.13	SUBSTRUCTURE CONCRETE	
218V.131	FORMWORK	
218V.132	REINF. STEEL	
218V.133	CONCRETE	
218V.134	EMBEDDED STEEL	
218V.135	FLOOR FINISH	
218V.136	WATERPROOFING	
218V.137	CONSTRUCTION JOINTS	
218V.138	RUBBING CONCRETE SURFACES	
218V.139	REMOVABLE CONCRETE PLUGS (	
218V.14	SUPERSTRUCTURE	
218V.141	CONCRETE WORK	
218V.1411	FORMWORK	
218V.14111	FORMWORK-WOOD	
218V.1412	REINF. STEEL	
218V.1413	CONCRETE	
218V.1414	EMBEDDED STEEL	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN MC AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
218V.1415	FLOOR FINISH	
218V.1416	WATERPROOFING	
218V.1417	RUBBING CONCRETE SURFACES	
218V.1418	CONSTRUCTION JOINTS	
218V.143	EXTERIOR WALLS	
218V.1431	CONCRETE	
218V.145	ROOFING + FLASHING	
218V.1452	B.U.ROOF & FLASH(NO INSUL)	
218V.149	PAINTING	
218V.1491	CONCRETE	
218V.2	BUILDING SERVICES	
218V.22	EMERG.O.A.DUCT(UNDERGRND)	
22	REACTOR PLANT EQUIPMENT	
220A.	NUCLEAR STEAM SUPPLY(NSSS)	SEE ACCOUNTS 221 THROUGH 228
220A.1	QUOTED NSSS PRICE	
220A.2	DISTRIBUTED NSSS COST	
220A.21	REACTOR EQUIPMENT	
220A.211	VESSEL STRUCTURE	
220A.212	VESSEL INTERNALS	
220A.2121	LOWER INTERNALS	
220A.2122	UPPER INTERNALS	
220A.213	CONTROL ROD SYSTEM	
220A.2131	CONTROL RODS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
220A.2132	CONTROL ROD DRIVES	
220A.22	MAIN HEAT XFER XPORT SYS	
220A.221	MAIN COOLANT PUMPS	
220A.222	REACTOR COOLANT PIPING	
220A.223	STEAM GENERATORS	
220A.224	PRESSURIZER	
220A.225	PRESSURIZER RELIEF TANK	
220A.23	SAFEGUARDS SYSTEM	
220A.231	RESIDUAL HEAT RMVL SYSTEM	
220A.2311	RHR PUMPS & DRIVES	
220A.2312	RHR HEAT EXCHANGER	
220A.232	SAFETY INJECTION SYSTEM	
220A.2321	SI PUMPS & DRIVES	
220A.2322	ACCUMULATOR TANKS	
220A.2323	BORON INJECTION TANK	
220A.2324	BORON INJECTION SURGE TANK	
220A.2325	BORON INJ RECIRC PUMP&DRV	
220A.25	FUEL HANDLING & STORAGE	
220A.251	FUEL HANDLING TOOLS	
220A.26	OTHER EQUIPMENT	
220A.261	COOLANT TREATMENT & RECVRY	
220A.2611	ROTATING MACHINERY	
220A.26111	CENTRIFUGAL CHRG PMP & MTR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
220A.26112	POS DISPL CHRG PMP & MTR	
220A.26113	BORIC ACID XFER PMP & MTR	
220A.26114	CHILLER PMP & MTR	
220A.26115	BORON INJ M/U PMP & MTR	
220A.2612	HEAT TRANSFER EQUIPMENT	
220A.26121	MODERATING HX	
220A.26122	MN COOLANT PMP SEAL H2O HX	
220A.26123	CHILLER	
220A.26124	REGENERATIVE HX	
220A.26125	LETDOWN HX	
220A.26126	EXCESS LETDOWN HX	
220A.26127	LETDOWN CHILLER HX	
220A.26128	LETDOWN REHEAT HX	
220A.2613	TANKS & PRESSURE VESSELS	
220A.26131	VOLUME CONTROL TANK	
220A.26132	CHILLER SURGE TANK	
220A.26133	BORIC ACID BATCH TANK	
220A.26134	CHEMICAL DRAIN TANK	
220A.2614	PURIF & FILTRATION EQUIP	
220A.26141	MIXED BED DEMINS	
220A.26142	CATION DEMINS	
220A.26143	PROCESS FILTERS	
220A.26144	SEAL WATER INJ FILTER	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
220A.26145	THERMAL REGENERATION DEMIN	
220A.262	MAINTENANCE EQUIPMENT	
220A.27	INSTRUMENTATION & CONTROL	
220A.3	UNDISTRIBUTED NSSS COST	
220B.	NSSS OPTIONS	
221.	REACTOR EQUIPMENT	
221.1	REACTOR VESSEL + ACCESSORY	
221.11	REACTOR SUPPORT	
221.111	CONCRETE WORK	INCLUDED WITH CONTAINMENT BUILDING INTERIOR CONCRETE
221.112	STEEL SUPPORTS	ALLOWANCE
221.12	VESSEL STRUCTURE	
221.121	BODY AND ATTACHMENT	QUANTITY - 1 O.D. - 190.5 IN I.D. - 173.0 IN CLAD THICKNESS - .125 IN SS DESIGN PRESS - 2500 PSIA DESIGN TEMP - 650 F HEIGHT - 43 FT-10 IN BASE MATERIAL - LOW ALLOY STEEL CLAD MATERIAL - STAINLESS STEEL VESSEL WEIGHT - 695,000 LB HEAD WEIGHT - 160,000 LB SAFETY CLASS - 1 SEISMIC CAT. - I DESIGN CODE - ASME III, CLASS 1
221.122	CLOSURE AND ATTACHMENTS	
221.123	STUDS, FASTENERS, SEALS, GSKT	
221.126	INSULATION	ONE (1) LOT

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
221.13	VESSEL INTERNALS	TOTAL WEIGHT INCLUDING CORE - 646,000 LB
221.131	LOWER INTERNALS	ONE (1) LOT
221.132	UPPER INTERNALS	ONE (1) LOT
221.14	TRANSPORT TO SITE	COST INCLUDES TRANSPORTATION OF MAJOR NSSS COMPONENTS FROM THE BARGE TO THE CONTAINMENT BUILDING SITE. THE COST OF CONSTRUCTION OF A BARGE UNLOADING DOCK AND LIFTING AND TRANSPORTATION EQUIPMENT ARE INCLUDED.
221.2	REACTOR CONTROL DEVICES	
221.21	CONTROL ROD SYSTEM	
221.211	CONTROL RODS	NUMBER OF ASSEMBLIES: FULL LENGTH - 57 PART LENGTH - 8 CONTROL ELEMENTS/ASSMBY - 24
221.212	CONTROL ROD DRIVES (CRD)	QUANTITY - 65
221.213	CRD MISSILE SHIELD	QUANTITY - 1
221.214	CRDM SEISMIC SUPPORTS	ALLOWANCE
221.215	CRDMS + RODS- PU RECYCLE	
222.	MAIN HEAT XFER XPORT SYS.	
222.1	REACTOR CORE COOLANT SYS.	
222.11	FLUID CIRCULATION DR. SYS.	
222.111	ROTATING MACHINERY	
222.1111	MAIN COOLANT PUMPS&DRIVES	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
222.11111	MAIN COOLANT PUMPS	QUANTITY - 4 TYPE - SINGLE STAGE CENTRIFUGAL ORIENTATION - VERTICAL FLOW RATE - 94,400 GPM SPEED - TDH - 305 FT BHP - NPSH - 190 FT EFFICIENCY - DESIGN PRESS - 2,485 PSIG DESIGN TEMP - 650 F MATERIAL - SAFETY CLASS - 1 SEISMIC CAT. - 1 DESIGN CODE - ASME III, CLASS 1
222.11112	MAIN COOLANT PUMP DRIVES	TYPE - HORSEPOWER - 9,000 COLD, 7,000 HOT SPEED - VOLTAGE - 13.2 KV, 3 PH, 60 HZ
222.118	INSTRUMENTATION + CONTROL	
222.119	FOUNDATIONS / SKIDS	
222.1191	CONCRETE WORK	INCLUDED WITH CONTAINMENT BUILDING INTERIOR CONCRETE
222.1192	STEEL SUPPORTS	ALLOWANCE
222.12	REACT. COOLANT PIPING SYS.	
222.125	PIPING	
222.1251	2IN. + SMALLER	
222.12511	SS/NNS	
222.12512	SS/SC1	
222.12513	SS/SC2	
222.1252	2.5 + LARGER	
222.12521	SS/NNS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
222.12522	SS/SC1	
222.12523	SS/SC1 (FURNISHED WITH NSS)	
222.12524	SS/SC2	
222.126	REACTOR COOLANT VALVES	
222.1261	GATE	
222.1262	CHECK	
222.1263	GLOBE	
222.1264	SAUNDERS WEIR	
222.1265	RELIEF	
222.1267	BALL	
222.1269	SPECIAL VALVES	
222.12691	NEEDLE	
222.12692	ANGLE	
222.127	PIPING - MISC. ITEMS	
222.1271	HANGERS + SUPPORTS	
222.1272	INSULATION	
222.1273	SPECIALTIES	
222.128	INSTRUMENTATION + CONTROL	

ALLOWANCE

TRANSMITTERS -	66
LOCAL INDICATORS -	46
BOARD MOUNTED INDICATORS -	92
RECORDERS -	5
FLOW ELEMENTS -	4
TEMP ELEMENTS -	76
TEMP TRANSMITTERS -	60
PROCESS SWITCHES -	34
CONTROLLERS -	4
ANNUNCIATORS -	24
MISC -	28

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
222.13	STEAM GENERATOR EQUIPMENT	
222.132	HEAT TRANSFER EQUIPMENT	
222.1321	STEAM GENERATORS	<p>QUANTITY 4</p> <p>TYPE U-TUBE WITH INTEGRAL STEEL DRUM</p> <p>ORIENTATION VERTICAL</p> <p>HEAT LOAD</p> <p>SURFACE AREA</p> <p>SHELL CONDITION:</p> <p>DES.PRESS/TEMP 1,200 PSIA / 600 F</p> <p>TEMP IN/OUT 544.6 F</p> <p>FLOW RATE 15.14 E06 LB/HR</p> <p>FLUID STEAM (LESS THAN 0.25 PCT. MOISTURE)</p> <p>MATERIAL MN-MO STEEL</p> <p>SAFETY CLASS 2</p> <p>SEISMIC CAT. I</p> <p>DESIGN CODE ASME III, CLASS 2</p> <p>TUBE CONDITION:</p> <p>DES.PRESS/TEMP 2,500 PSIA / 650 F</p> <p>TEMP IN/OUT 618.2 F / 558.1 F</p> <p>FLOW RATE 35.075 E06 LB/HR</p> <p>FLUID RX COOLANT</p> <p>MATERIAL INCONEL</p> <p>SAFETY CLASS 1</p> <p>SEISMIC CAT. I</p> <p>DESIGN CODE ASME III, CLASS 1</p> <p>DRY WEIGHT - 660,000 LBS</p>
222.138		
222.139	FOUNDATIONS / SKIDS	
222.1391	CONCRETE WORK	INCLUDED WITH CONTAINMENT BUILDING INTERIOR CONCRETE
222.1392	STEEL SUPPORTS	ALLOWANCE
222.14	PRESSURIZING SYSTEM	
222.143	TANKS AND PRESSURE VESSELS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
222.1431	PRESSURIZER	QUANTITY - 1 VOLUME - 1,800 CU FT DESIGN PRESS - 2,500 PSIA DESIGN TEMP - 680 F ORIENTATION - VERTICAL MATERIAL - MN-MO STEEL, SS CLAD DESIGN CODE - ASME III, CLASS 1 SAFETY CLASS - 1 SEISMIC CAT - I HEATERS - 78 ELECTRIC IMMERSION HEATER POWER - 1,800 KW HEATER RATING - 460 V, 3 PHASE, 60 HZ
222.1432	PRESSURIZER RELIEF TANK	QUANTITY - 1 ORIENTATION - HORIZONTAL DIMENSIONS - VOLUME - 1,800 CU FT DESIGN PRESS - 100 PSIG DESIGN TEMP - 340 F MATERIAL - 304 SS SAFETY CLASS - NNS SEISMIC CAT. - I DESIGN CODE - ASME VIII
222.148	INSTRUMENTATION + CONTROL	INCLUDED WITH 222.128
222.149	FOUNDATIONS / SKIDS	
222.1491	CONCRETE WORK	INCLUDED WITH CONTAINMENT BUILDING INTERIOR CONCRETE
222.1492	STEEL SUPPORTS	ALLOWANCE
222.15	PRI COOL PIPE WHIP RESTRAINT	ALLOWANCE
222.151	PLATE	
222.152	SHEAR LUGS	
222.153	ANCHORS	
222.154	BEAMS	
222.155	U-BOLT & NUTS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
222.156	WELDS	
222.157	ELASTO-PLASTIC MATERIAL	
223.	SAFEGUARDS SYSTEM	
223.1	RESIDUAL HEAT REMOVAL SYS	
223.11	ROTATING MACHINERY	
223.111	RHR PUMPS AND DRIVES	
223.1111	RHR PUMPS	QUANTITY - 2 X 50 PCT (DESIGN COOLDOWN) TYPE - CENTRIFUGAL ORIENTATION - VERTICAL FLOW RATE - 3800 GPM SPEED - TDH - 350 FT BHP - NPSH - 18 FT EFFICIENCY - DESIGN PRESS - 600 PSIG DESIGN TEMP - 400 F MATERIAL - STAINLESS STEEL SAFETY CLASS - 2 SEISMIC CAT. - I DESIGN CODE - ASME III, CLASS 2
223.1112	RHR PUMP DRIVES	TYPE - HORSEPOWER - 400 HP SPEED - VOLTAGE - 4000 V, 3 PHASE, 60 HZ
223.12	HEAT TRANSFER EQUIPMENT	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
223.121	RHR HEAT EXCHANGERS	QUANTITY - 2 K 50 PCT (DESIGN COOLDOWN) TYPE - SHELL AND U-TUBE ORIENTATION VERTICAL HEAT LOAD - 39.1E+06 BTU/HR SURFACE AREA - SHELL CONDITION: DES.PRESS/TEMP - 150 PSIG/200 F TEMP IN/OUT - 105 F/115.2 F FLOW RATE - 3.8E+06 LB/HR MATERIAL - CARBON STEEL SAFETY CLASS - 3 FOULING FACTOR - 0.0005 TUBE CONDITION: QUANTITY - SIZE - DES.PRESS/TEMP - 600 PSIG/400 F TEMP IN/OUT - 140 F/119.4 F FLOW RATE - 1.9E+06 LB/HR MATERIAL - STAINLESS STEEL SAFETY CLASS - 2 FOULING FACTOR - 0.0003 SEISMIC CAT. - 1 DESIGN CODE - DRY WEIGHT - 29,000 LB
223.15	PIPING	
223.151	2IN + SMALLER	
223.1511	SS/SC2	
223.152	2.5IN + LARGER	
223.1521	SS/SC1	
223.1522	SS/SC2	
223.16	RHR VALVES	
223.161	GATE	
223.162	CHECK	
223.163	GLOBE	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
223.165	RELIEF	
223.166	BUTTERFLY	
223.17	PIPING - MISC. ITEMS	
223.171	HANGERS + SUPPORTS	
223.172	INSULATION	
223.173	SPECIALTIES	
223.18	INSTRUMENTATION + CONTROL	TRANSMITTERS - 4 LOCAL INDICATORS - 10 BOARD MOUNTED INDICATORS - 30 FLOW ELEMENTS - 8 TEMP ELEMENTS - 8 TEMP TRANSMITTERS - 4 PROCESS SWITCHES - 11 ANNUNCIATORS - 10 MISCELLANEOUS - 23
223.3	SAFETY INJECTION SYSTEM	
223.31	ROTATING MACHINERY	
223.311	S.I. PUMPS AND DRIVES	
223.3111	S I PUMPS	QUANTITY - 2 X 100 PCT TYPE - CENTRIFUGAL, 10 STAGE DIFFUSER ORIENTATION - HORIZONTAL FLOW RATE - 425 GPM SPEED - TDH - 2500 FT BHP - NPSH - 35 FT EFFICIENCY - DESIGN PRESS - 1750 PSIG DESIGN TEMP - 300 F MATERIAL - STAINLESS STEEL SAFETY CLASS - 2 SEISMIC CAT. - I DESIGN CODE - ASME III, CLASS 2

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HE AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
223.3112	S I PUMP DRIVES	TYPE - HORSEPOWER - 400 HP SPEED - VOLTAGE - 4000 V, 3 PHASE, 60 HZ
223.312	BORON INJECT PUMP + DRIVE	
223.3121	BORON INJ RECIRC PUMP	QUANTITY - 2 X 100 PCT TYPE - CENTRIFUGAL, CANNED ORIENTATION - HORIZONTAL FLOW RATE - 20 GPM SPEED - TDH - 100 FT BHP - NPSH - EFFICIENCY - DESIGN PRESS - 150 PSIG DESIGN TEMP - 250 F MATERIAL - STAINLESS STEEL SAFETY CLASS - 3 SEISMIC CAT. - I DESIGN CODE - ASME III, CLASS 3
223.3122	BORON INJ RECIRC PUMP DRIVE	TYPE - HORSEPOWER - 3 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
223.33	TANKS AND PRESSURE VESSELS	
223.331	ACCUMULATOR TANK	QUANTITY - 4 ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 1350 CU FT DESIGN PRESS - 700 PSIG DESIGN TEMP - 300 F MATERIAL - CARBON STEEL WITH STAINLESS STEEL LINER SAFETY CLASS - 2 SEISMIC CAT. - I DESIGN CODE - ASME III, CLASS 2 DRY WEIGHT - 80,000 LB

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
223.332	BORON INJECTION TANK	QUANTITY - 1 ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 900 GAL DESIGN PRESS - 2735 PSIG DESIGN TEMP - 300 F MATERIAL - CARBON STEEL WITH STAINLESS STEEL LINER SAFETY CLASS - 2 SEISMIC CAT. - I DESIGN CODE - ASME III, CLASS 2 DRY WEIGHT - 20,000 LB
223.333	BORON INJECTION SURGE TANK	QUANTITY - 1 ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 75 GAL DESIGN PRESS - ATMOS DESIGN TEMP - 200 F MATERIAL - STAINLESS STEEL SAFETY CLASS - 3 SEISMIC CAT. - I DESIGN CODE - ASME III, CLASS 3 DRY WEIGHT - 325 LB
223.334	REFUELING WATER STORAGE TK	QUANTITY - 1 ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 375,000 GAL DESIGN PRESS - ATMOS DESIGN TEMP - 100 F MATERIAL - STAINLESS STEEL SAFETY CLASS - 2 SEISMIC CAT. - I DESIGN CODE - ASME III, CLASS 2
223.35	PIPING	
223.351	2IN. + SMALLER	
223.3511	SS/NNS	
223.3512	SS/SC1	
223.3513	SS/SC2	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
223.3514	SS/SC3	
223.352	2.5 IN + LARGER	
223.3521	SS/SC1	
223.3522	SS/SC2	
223.36	VALVES	
223.361	GATE	
223.362	CHECK	
223.363	GLOBE	
223.364	DIAPHRAGM/SAUNDERS WEIR	
223.365	RELIEF	
223.369	SPECIAL VALVES	
223.3691	NEEDLE	
223.37	PIPING - MISC. ITEMS	
223.371	HANGERS + SUPPORTS	
223.372	INSULATION	
223.373	SPECIALTIES	
223.38	INSTRUMENTATION + CONTROL	TRANSMITTERS - 26 LOCAL INDICATORS - 9 BOARD MOUNTED INDICATORS - 30 FLOW ELEMENT - 18 TEMP ELEMENT - 4 PROCESS SWITCHES - 5 CONTROLLERS - 16
223.4	CONTAINMENT SPRAY SYSTEM	
223.41	ROTATING MACHINERY	
223.411	CONTAINMT SPRAY PUMP + MTR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 M&E/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
223.4111	CONTAINMENT SPRAY PUMP	<p>QUANTITY - 2 X 100 PCT TYPE - CENTRIFUGAL ORIENTATION - HORIZONTAL FLOW RATE - 3010 GPM SPEED - TDH - 540 FT BHP - NPSH - 22 FT EFFICIENCY - DESIGN PRESS - 300 PSIG DESIGN TEMP - 300 F MATERIAL - STAINLESS STEEL SAFETY CLASS - 2 SEISMIC CAT. - I DESIGN CODE - ASME III, CLASS 2</p>
223.4112	CONTAINMENT SPRAY PUMP MTR	<p>TYPE - HORSEPOWER - 600 HP SPEED - VOLTAGE - 4000 V, 3 PHASE, 60 HZ</p>
223.42	HEAT TRANSFER EQUIPMENT	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
223.421	CONTAIN. SPRAY HEAT XCHNGER	QUANTITY - 2 X 100 PCT TYPE - SHELL AND U-TUBE ORIENTATION - VERTICAL HEAT LOAD - 96.7 E06 BTU/HR SURFACE AREA - SHELL CONDITION: DES. PRESS/TEMP - 150 PSIG/200 F TEMP IN/OUT - 120 F/161 F FLOW RATE - 2.35E+06 LB/HR FLUID - BORATED RX COOLANT MATERIAL - SAFETY CLASS - 3 DESIGN CODE - ASME III, CLASS 3 TUBE CONDITION: QUANTITY - SIZE - DES. PRESS/TEMP - 300 PSIG/300 F TEMP IN/OUT - 245 F/181 F FLOW RATE - 1.5E+06 LB/HR MATERIAL - SAFETY CLASS - 2 FLUID - CCW DESIGN CODE - ASME III, CLASS 2 SEISMIC CAT. - I
223.43	TANKS AND PRESSURE VESSELS	
223.431	SPRAY ADDITIVE TANK	QUANTITY - 1 ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 8396 GAL DESIGN PRESS - ATMOS DESIGN TEMP - 100 F MATERIAL - STAINLESS STEEL SAFETY CLASS - 3 SEISMIC CAT. - I DESIGN CODE - ASME III, CLASS 3
223.45	PIPING	
223.451	2IN. + SMALLER	
223.4511	SS/NNS	
223.4512	SS/SC2	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
223.452	2.5IN + LARGER	
223.4521	SS/NNS	
223.4522	SS/SC2	
223.46	VALVES + FITTINGS	
223.461	VALVES	
223.4611	GATE	
223.4612	CHECK	
223.4613	GLOBE	
223.4614	DIAPHRAGM/SAUNDERS WEIR	
223.4615	RELIEF	
223.462	FITTINGS	
223.4621	CONTAINMENT SPRAY NOZZLES	<p>QUANTITY - 396</p> <p>FLOW PER NOZZLE - 15.2 GPM</p> <p>MEAN DROPLET SIZE - 700 MICRON</p> <p>MATERIAL - STAINLESS STEEL</p> <p>SAFETY CLASS - 2</p> <p>SEISMIC CAT. - I</p> <p>DESIGN CODE - ASME III, CLASS 2</p>
223.47	PIPING - MISC. ITEMS	
223.471	HANGERS + SUPPORTS	
223.472	INSULATION	
223.473	SPECIALTIES	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
223.48	INSTRUMENTATION + CONTROL	TRANSMITTERS - 18 LOCAL INDICATORS - 6 BOARD MOUNTED INDICATORS - 30 RECORDERS - 1 FLOW ELEMENTS - 5 TEMP ELEMENTS - 4 TEMP TRANSMITTERS - 6 PROCESS SWITCHES - 19 ANNUNCIATOR POINTS - 24 MISCELLANEOUS - 17
223.5	COMBUSTIBLE GAS CONTROL SY	
223.55	PIPING	
223.56	VALVES	
223.57	PIPING - MISC ITEMS	
223.571	HANGERS + SUPPORTS	
223.572	INSULATION	
223.573	SPECIALTIES	
223.58	INSTRUMENTATION + CONTROL	TRANSMITTERS - 1 LOCAL INDICATORS - 5 BOARD MOUNTED INDICATORS - 10 FLOW ELEMENTS - 1 TEMP ELEMENTS - 8 TEMP TRANSMITTERS - 3 PROCESS SWITCHES - 2 ANNUNCIATORS - 14 MISCELLANEOUS - 12
223.59	FOUNDATIONS / SKIDS	
223.591	HYDROGEN RECOMBINER	QUANTITY - 2 TYPE - SAFETY CLASS - 2 SEISMIC CAT. - 1 DESIGN CODE - ASME III, CLASS 2
223.5911	ROTATING MACHINERY	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
223.59111	BLOWER	<p>QUANTITY - 2 (1 PER SKID)</p> <p>TYPE -</p> <p>FLOW RATE - 50 SCFM</p> <p>MOTOR:</p> <p>TYPE -</p> <p>HORSEPOWER -</p> <p>SPEED -</p> <p>VOLTAGE - 460 V, 3 PHASE, 60 HZ</p>
223.5912	HEAT TRANSFER EQUIPMENT	
223.59121	ELECTRIC HEATERS	<p>QUANTITY - 2 SETS</p> <p>AIR FLOW RATE - 50 SCFM</p> <p>INLET TEMP -</p> <p>OUTLET TEMP - 500 F</p> <p>INLET R.H. -</p> <p>ELEC. RATING - 460 V, 3 PHASE, 60 HZ</p> <p>DESIGN INTEGRATED</p> <p>RADIATION DOSE -</p>
223.59122	DISCHARGE COOLER	<p>QUANTITY - 1</p> <p>TYPE - METALLIC FINNED</p> <p>HEAT LOAD - 60,000 BTU/HR</p> <p>FLOW RATE - 50 SCFM</p> <p>RATED DIFF TEMP - 850 F</p> <p>COOLANT - AIR</p> <p>COOLANT TEMP - 0 TO 120 F</p>
223.5913	TANKS AND PRESSURE VESSELS	
223.59131	CATALYTIC RECOMBINER VESSL	
224.	RADWASTE PROCESSING	
224.1	LIQUID WASTE SYSTEM	
224.11	EQUIPMENT DRAIN TRAIN	
224.111	ROTATING MACHINERY	
224.1111	EQUIP DRN TNK PUMPS + MTRS	

EQUIPMENT LIST - REPORT 1

US/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN LG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.11111	EQUIP DRAIN TANK PUMPS	QUANTITY - 2 X 100 PCT TYPE - CENTRIFUGAL ORIENTATION - HORIZONTAL FLOW RATE - 25 GPM SPEED - 3,500 RPM TDH - 220 FT BHP - 2.3 HP NPSH - FLOODED SUCTION EFFICIENCY - 60 PCT DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - 316 SS SAFETY CLASS - NWS SEISMIC CAT. - NONE DESIGN CODE -
224.11112	EQUIP DRAIN TK PMP DRIVES	TYPE - HORSEPOWER - 3 HP SPEED - 3,600 RPM VOLTAGE - 460 V, 3 PHASE, 60 HZ
224.1112	EQUIP DRN TEST TK PUMP+MTR	
224.11121	EQUIP DRN TEST TK PUMP	QUANTITY - 2 X 100 PCT TYPE - CENTRIFUGAL ORIENTATION - HORIZONTAL FLOW RATE - 25 GPM SPEED - 3,500 RPM TDH - 130 FT BHP - 1.4 HP NPSH - FLOODED SUCTION EFFICIENCY - 60 PCT DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - 316 SS SAFETY CLASS - NWS SEISMIC CAT. - NONE DESIGN CODE -
224.11122	EQUIP DRN TST TK PMP DRIVE	TYPE - HORSEPOWER - 2 HP SPEED - 3,600 RPM VOLTAGE - 460 V, 3 PHASE, 60 HZ
224.1113	RCDT PUMP	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.11131	RX COOLANT DRN TANK PUMP	<p>QUANTITY - 2 X 100 PCT TYPE - CENTRIFUGAL, CANNED ORIENTATION - FLOW RATE - 100/140 GPM SPEED - TDH - 300/250 FT BHP - NPSH - FLOODED SUCTION EFFICIENCY - DESIGN PRESS - 150 PSIG DESIGN TEMP - 250 F MATERIAL - 316 SS SAFETY CLASS - WNS SEISMIC CAT. - NONE DESIGN CODE -</p>
224.11132	RX COOLANT DRN TK PMP DRV	<p>TYPE - HORSEPOWER - 15 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ</p>
224.112	HEAT TRANSFER EQUIP	
224.1121	WASTE EVAPORATOR PACKAGE	<p>INCLUDES: PUMPS, HEAT EXCHANGERS, TANKS CONTROLS, INSTRUMENTATION, AND ASSOCIATED PIPING AND VALVES</p> <p>QUANTITY - 1 TYPE - FORCED CIRCULATION FLOW RATE - 15 GPM DISCHARGE PRESS - 50 PSIG DESIGN PRESS - DESIGN TEMP - MATERIAL - 316 SS SAFETY CLASS - WNS SEISMIC CAT - NONE DESIGN CODE -</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.1122	RCDT HEAT EXCHANGER	QUANTITY - 1 TYPE - U-TUBE ORIENTATION - HEAT LOAD - 70,000 BTU/HR SURFACE AREA - SHELL CONDITION: DES.PRESS/TEMP - 150 PSIG / 250 F TEMP IN/OUT - FLOW RATE - 112,000 LB/HR MATERIAL - CS TUBE CONDITION: QUANTITY - SIZE - DES.PRESS/TEMP - 250 PSIG / 250 F TEMP IN/OUT - FLOW RATE - 44,600 LB/HR MATERIAL - SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
224.113	TANKS AND PRESSURE VESSELS	
224.1131	EQUIP DRAIN TANKS	QUANTITY - 2 X 100 PCT ORIENTATION - VERTICAL DIMENSIONS - VOLUME 6,000 GAL DESIGN PRESS - 15 PSIG DESIGN TEMP - 200 F MATERIAL - 304 OR 316 SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
224.1132	EQUIP DRAIN TEST TANKS	QUANTITY - 2 X 100 PCT ORIENTATION - VERTICAL DIMENSIONS - VOLUME 6,000 GAL DESIGN PRESS - 15 PSIG DESIGN TEMP - 200 F MATERIAL - 304 OR 316 SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.1133	REACT COOLANT DRAIN TANK	QUANTITY - 1 ORIENTATION - HORIZONTAL DIMENSIONS - VOLUME - 350 GAL DESIGN PRESS - 100INTRNL/60EXTRNL PSIG DESIGN TEMP - 250 F MATERIAL - SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
224.114	PURIFICATION EQUIP	
224.1141	EQUIP DRAIN FILTER	QUANTITY - 1 TYPE - CARTRIDGE FLOW RATE - 15 GPM DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F DIFF. PRESS: CLEAN/DIRTY - 5/50 PSI RATING/SIZE - 98 PCT, 1 MICRON & LARGER MATERIAL - 304 OR 316 SS DIRT CAPACITY - SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
224.1142	WASTE EVAP COND DEMIN	QUANTITY - 1 ORIENTATION - VERTICAL RESIN TYPE - H-DM SIZE - 2 FT DIA RESIN VOLUME - 12.6 CU FT FLOW RATE - 15 GPM FREEBOARD - BED DEPTH - 4 FT DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - 316 SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
224.115	PIPING	ALLOWANCE
224.1151	2.0IN + SMALLER	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.1152	2.5IN + LARGER	
224.116	VALVES	
224.1162	CHECK VALVES	
224.1165	RELIEF VALVES	
224.1168	PLUG VALVES	
224.117	PIPING-MISC. ITEMS	
224.1171	HANGERS+SUPPORTS	
224.1172	POST DEMIN. STRAINER	QUANTITY - 1 TYPE - "1" FLOW RATE - 15 GPM DESIGN PRESS - 150 PSIG DESIGN TEMP - 230 F DIFF. PRESS: CLEAN/DIRTY - 0.5/1.5 PSI RATING/SIZE - 50 US MESH MATERIAL - SS DIRT CAPACITY - SAFETY CLASS - MNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
224.1173	INSULATION	
224.118		
224.12	MISC WASTE TRAIN	
224.121	ROTATING MACHINERY	
224.1211	MISC WASTE TANK PUMPS+MTRS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.12111	MISC WASTE TANK PUMP	QUANTITY - 2 X 100 PCT TYPE - CENTRIFUGAL ORIENTATION - HORIZONTAL FLOW RATE - 60 GPM SPEED - 3,500 RPM TDH - 230 FT BHP - 5.8 HP NPSH - FLOODED SUCTION EFFICIENCY - 60 PCT DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - 316 SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
224.12112	MISC WASTE TANK PUMP DRIVE	TYPE - HORSEPOWER - 6 HP SPEED - 3,600 RPM VOLTAGE - 460 V, 3 PHASE, 60 HZ
224.1212	MISC WASTE TEST TK PP+MTRS	
224.12121	MISC WASTE TEST TK PUMP	QUANTITY - 2 X 100 PCT TYPE - CENTRIFUGAL ORIENTATION - HORIZONTAL FLOW RATE - 60 GPM SPEED - 3,500 RPM TDH - 230 FT BHP - 5.8 HP NPSH - FLOODED SUCTION EFFICIENCY - 60 PCT DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - 316 SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
224.12122	MISC WASTE TEST TK PMP DRV	TYPE - HORSEPOWER - 6 HP SPEED - 3,600 RPM VOLTAGE - 460 V, 3 PHASE, 60 HZ
224.122	HEAT EXCHANGE EQUIPMENT	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN 4G AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.123	TANKS AND PRESSURE VESSELS	
224.1231	MISC WASTE TANKS	QUANTITY - 2 X 100 PCT ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 15,000 GAL DESIGN PRESS - 15 PSIG DESIGN TEMP - 200 F MATERIAL - 304 OR 316 SS SAFETY CLASS - NWS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
224.1232	MISC WASTE TEST TANKS	QUANTITY - 2 X 100 PCT ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 15,000 GAL DESIGN PRESS - 15 PSIG DESIGN TEMP - 200 F MATERIAL - 304 OR 316 SS SAFETY CLASS - NWS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
224.124	PURIF AND FILTRATION EQUIP	
224.1241	MISC WASTE FILTERS	QUANTITY - 2 X 100 PCT TYPE - CARTRIDGE FLOW RATE - 15 GPM DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F DIFF. PRESS: CLEAN/DIRTY - 5/50 PSI RATING/SIZE - 98 PCT, 1 MICRON & LARGER MATERIAL - 304 OR 316 SS DIRT CAPACITY - SAFETY CLASS - NWS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.1242	MISC WASTE DEMINERALIZER	QUANTITY - 2 X 100 PCT ORIENTATION - VERTICAL RESIN TYPE - H-OH SIZE - 2 FT DIA RESIN VOLUME - 12.6 CU FT FLOW RATE - 15 GPM FREEBOARD - BED DEPTH - 4 FT DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - 316 SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
224.1243	MISC WASTE R/O UNITS	INCLUDES: HIGH PRESSURE FEED PUMP, RO MEMBRANES, EQUIPMENT SKID, PIPING, VALVES, INSTRUMENTATION AND CONTROLS, AND IF REQUIRED A HEAT EXCHANGER, TANKS, AND PERMEATE BOOSTER PUMP QUANTITY - 2 X 100 PCT FLOW - 15 GPM % WATER RECOVERY - 85 PCT PERMEATE PRESS - 60 PSIG DESIGN PRESS - 800 PSIG DESIGN TEMP - 200 F MATERIAL - 304 OR 316 SS SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE - ASME VIII
224.125	PIPING	INCLUDED IN ACCOUNT NUMBER 224.115
224.1251	2.0IN + SMALLER	
224.1252	2.5IN + LARGER	
224.126	VALVES	
224.1262	CHECK VALVES	
224.1268	PLUG	
224.127	PIPING-MISC. ITEMS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.1271	HANGERS+SUPPORTS	
224.1272	STRAINERS	QUANTITY - 2 X 100 PCT TYPE - "Y" FLOW RATE - 15 GPM DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F DIFF. PRESS: CLEAN/DIRTY - 0.5/1.5 PSI RATING/SIZE - 50 US MESH MATERIAL - SS DIRT CAPACITY - SAFETY CLASS - NMS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
224.128		
224.13	DETERGENT WASTE TRAIN	
224.131	ROTATING MACHINERY	
224.1311	DETER WASTE TANK PUMPS+MTR	
224.13111	DETER WASTE TANK PUMPS	QUANTITY - 2 X 100 PCT TYPE - CENTRIFUGAL ORIENTATION - HORIZONTAL FLOW RATE - 25 GPM SPEED - 3,500 RPM TDH - 270 FT BHP - 2.8 HP NPSH - FLOODED SUCTION EFFICIENCY - 60 PCT DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - 316 SS SAFETY CLASS - NMS SEISMIC CAT. - NONE DESIGN CODE -
224.13112	DETER WASTE TANK PMP DRIVE	TYPE - HORSEPOWER - 3 HP SPEED - 3,600 RPM VOLTAGE - 460 V, 3 PHASE, 60 HZ

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.1312	DET WASTE TEST TK PUMP+MTR	
224.13121	DET WASTE TEST TK PUMP	QUANTITY - 2 X 100 PCT TYPE - CENTRIFUGAL ORIENTATION - HORIZONTAL FLOW RATE - 25 GPM SPEED - 3,500 RPM TDH - 130 FT BHP - 1.4 HP NPSH - FLOODED SUCTION EFFICIENCY - 60 PCT DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - 316 SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
224.13122	DET WASTE TEST TK PMP DRV	TYPE - HORSEPOWER - 2 HP SPEED - 3,600 RPM VOLTAGE - 460 V, 3 PHASE, 60 HZ
224.132	HEAT TRANSFER EQUIPMENT	
224.133	TANKS AND PRESSURE VESSELS	
224.1331	DETERGENT WASTE TANKS	QUANTITY - 2 X 100 PCT ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 6,000 GAL DESIGN PRESS - 15 PSIG DESIGN TEMP - 200 F MATERIAL - 304 OR 316 SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.1332	DETERGENT WASTE TEST TANKS	<p>QUANTITY - 2 X 100 PCT ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 6,000 GAL DESIGN PRESS - 15 PSIG DESIGN TEMP - 200 F MATERIAL - 304 OR 316 SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII</p>
224.134	PURIF AND FILTRATION EQUIP	
224.1341	DETERGENT FILTER	<p>QUANTITY - 1 TYPE - CARTRIDGE FLOW RATE - 10 GPM DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F DIFF. PRESS: CLEAN/DIRTY - 5/50 PSI RATING/SIZE - 98 PCT, 1 MICRON & LARGER MATERIAL - 304 OR 316 SS DIRT CAPACITY - SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII</p>
224.1342	DETERGENT DEMINERALIZER	<p>QUANTITY - 1 ORIENTATION - VERTICAL RESIN TYPE - H-OH SIZE - 18 IN DIA RESIN COLUME - 7.1 CU FT FLOW RATE - 10 GPM FREEBOARD - BED DEPTH - 4 FT DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - 306 SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.1343	DETERGENT R/O UNIT PACKAGE	<p>INCLUDES: HIGH PRESSURE FEED PUMP, RO MEMBRANES, EQUIPMENT SKID, PIPING, VALVES, INSTRUMENTATION AND CONTROLS, AND IF REQUIRED A HEAT EXCHANGER, TANKS, AND PERMEATE BOOSTER PUMP</p> <p>QUANTITY - 1 FLOW - 10 GPM % WATER RECOVERY - 85 PCT PERMEATE PRESS - 50 PSIG DESIGN PRESS - 800 PSIG DESIGN TEMP - 200 F MATERIAL - 304 OR 316 SS SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE - ASME VIII</p>
224.1344	DETERGENT WASTE STRAINER	<p>QUANTITY - 1 TYPE - DUPLEX BASKET STRAINER FLOW RATE - 10 GPM DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F DIFF. PRESS - CLEAN/DIRTY - 1.0 / 10 PSI RATING/SIZE - MATERIAL - SS DIRT CAPACITY - SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII</p>
224.135	PIPING	INCLUDED IN ACCOUNT NUMBER 224.115
224.136	VALVES	
224.1362	CHECK VALVES	
224.1368	PLUG	
224.137	PIPING-MISC ITEMS	
224.1371	HANGERS + SUPPORTS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.1372	RESIN STRAINER	QUANTITY - 1 TYPE - "Y" FLOW RATE - 10 GPM DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F DIFF. PRESS: CLEAN/DIRTY - 0.5/1.5 PSI RATING/SIZE - 50 US MESH MATERIAL - SS DIRT CAPACITY - SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
224.14	CHEMICAL WASTE TRIN	
224.141	ROTATING MACHINERY	
224.1411	CHEMICAL WASTE TK PUMP+MTR	
224.14111	CHEMICAL WASTE TK PUMP	QUANTITY - 1 TYPE - CENTRIFUGAL ORIENTATION - HORIZONTAL FLOW RATE - 25 GPM SPEED - 3,500 RPM TDH - 130 FT BHP - 1.4 HP NPSH - FLOODED SUCTION EFFICIENCY - 60 PCT DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - 316 SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
224.14112	CHEM WASTE TK PUMP DRV	TYPE - HORSEPOWER - 2 HP SPEED - 3,500 RPM VOLTAGE - 460 V, 3 PHASE, 60 HZ
224.142	HEAT TRANSFER EQUIPMENT	
224.143	TANKS AND PRESSURE VESSELS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.1431	CHEMICAL WASTE TANK	QUANTITY - 1 ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 375 GAL DESIGN PRESS - 15 PSIG DESIGN TEMP - 200 F MATERIAL - 304 OR 316 SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
224.144	PURIF AND FILTER EQUIPMENT	
224.145	PIPING	INCLUDED IN ACCOUNT NUMBER 224.115
224.146	VALVES	
224.1462	CHECK	
224.1468	PLUG	
224.147	PIPING-MISC ITEMS	
224.1471	HANGERS+SUPPORTS	
224.148		
224.15	STM GEN BLOWDOWN	
224.151	STM GEN BLOWDOWN TREATMENT	
224.1511	BLOWDOWN DISCH PUMP&DRIVE	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.15111	BLOWDOWN DISCHARGE PUMP	QUANTITY - 2 X 100 PCT TYPE - CANNED ORIENTATION - HORIZONTAL FLOW RATE - 100 GPM SPEED - TDH - 330 FT BHP - 13.9 HP NPSH - FLOODED SUCTION EFFICIENCY - 60 PCT DESIGN PRESS - 300 PSIG DESIGN TEMP - 250 F MATERIAL - SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
224.15112	BLOWDOWN DISCH PUMP DRIVE	TYPE - HORSEPOWER - 15 HP SPEED - VOLTAGE -
224.1512	HEAT TRANSFER EQUIPMENT	
224.15121	BLOWDOWN HEAT EXCHANGER	QUANTITY - 1 TYPE - SHELL & TUBE ORIENTATION - HORIZONTAL HEAT LOAD - SURFACE AREA - SHELL CONDITION: DES.PRESS/TEMP - 150 PSIG / 150 F TEMP IN/OUT - 95 F / FLOW RATE - MATERIAL - TUBE CONDITION: QUANTITY - SIZE - DES.PRESS/TEMP - 1,300 PSIG / 600 F TEMP IN/OUT - 600 F / 190 F MAX FLOW RATE - 200 GPM INTERMITNT MATERIAL - INCONEL SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
224.1513	TANKS 3 PRESSURE VESSELS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.15131	BLOWDOWN SURGE TANK	<p>QUANTITY - 1</p> <p>ORIENTATION - VERTICAL</p> <p>DIMENSIONS -</p> <p>VOLUME - 1,421 GAL</p> <p>DESIGN PRESS - 14.7 PSIA</p> <p>DESIGN TEMP - 300 F</p> <p>MATERIAL - CARBON STEEL</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT. - NONE</p> <p>DESIGN CODE - ASME VIII</p>
224.1514	PURIFICATION & FILT EQUIP	
224.15141	BLOWDOWN CATION DEMIN	<p>QUANTITY - 2 X 100 PCT</p> <p>TYPE - FLUSHABLE, NON-REGEN</p> <p>ORIENTATION - VERTICAL</p> <p>RESIN TYPE - CATION</p> <p>SIZE -</p> <p>RESIN VOLUME - 75 CU FT</p> <p>FLOW RATE - 200 GPM</p> <p>FREEBOARD -</p> <p>BED DEPTH -</p> <p>DESIGN PRESS - 300 PSIG</p> <p>DESIGN TEMP - 250 F</p> <p>MATERIAL - SS</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT. - NONE</p> <p>DESIGN CODE - ASME VIII</p>
224.15142	BLOWDOWN MIXED-BED DEMIN	<p>QUANTITY - 2 X 100 PCT</p> <p>TYPE - FLUSHABLE, NON-REGEN</p> <p>ORIENTATION -</p> <p>RESIN TYPE - MIXED BED</p> <p>SIZE -</p> <p>RESIN VOLUME - 75 CU FT</p> <p>FLOW RATE - 200 GPM</p> <p>FREEBOARD -</p> <p>BED DEPTH -</p> <p>DESIGN PRESS - 300 PSIG</p> <p>DESIGN TEMP - 250 F</p> <p>MATERIAL - SS</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT. - NONE</p> <p>DESIGN CODE - ASME VIII</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.15143	BLOWDOWN INLET FILTER	QUANTITY - 1 TYPE - CARTRIDGE FLOW RATE - 250 GPM DESIGN PRESS - 150 PSIG DESIGN TEMP - 300 F DIFF. PRESS: CLEAN/DIRTY - RATING/SIZE - 98 PCT, 2 MICRON & LARGER MATERIAL - CS DIRT CAPACITY - SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
224.15144	BLOWDOWN OUTLET FILTER	QUANTITY - 1 TYPE - CARTRIDGE FLOW RATE - 250 GPM DESIGN PRESS - 300 PSIG DESIGN TEMP - 250 F DIFF. PRESS: CLEAN/DIRTY - RATING/SIZE - 98%, 25 MICRON & LARGER MATERIAL - CS DIRT CAPACITY - SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
224.1515	PIPING	
224.15151	2IN & SMALLER	ALLOWANCE
224.15152	2.5IN & LARGER	
224.1516	VALVES	
224.15162	CHECK	
224.15163	GLOBE	
224.15164	DIAPHRAGM	
224.1517	PIPING - MISC. ITEMS	
224.15171	HANGERS & SUPPORTS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.15172	INSULATION	
224.1518	INSTRUMENTATION&CONTROL	TRANSMITTER - 7 LOCAL INDICATORS - 5 BOARD MTD IND - 1 RECORDERS - 1 PROCESS SWITCHES - 8 CONTROLLERS - 8 MISC - 4
224.1519	FOUNDATIONS & SKIDS	
224.16	REGEN CHEM WASTE TRAIN	
224.161	ROTATING MACHINERY	
224.1611	REGEN WASTE TANK PUMP+MTR	
224.16111	REGEN WASTE TANK PUMP	QUANTITY - 2 X 100 PCT TYPE - CENTRIFUGAL ORIENTATION - VERTICAL FLOW RATE - 160 GPM SPEED - 3,500 RPM TDH - 200 FT BHP - 13.5 HP NPSH - FLOODED SUCTION EFFICIENCY - 60 PCT DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - 316 SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
224.16112	REGEN WASTE TANK PMP DRIVE	TYPE - HORSEPOWER - 15 HP SPEED - 3,600 RPM VOLTAGE - 460 V, 3 PHASE, 60 HZ
224.1612	REGEN WASTE TEST TK PP+MTR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.16121	REGEN WASTE TST TK PUMP	QUANTITY - 2 X 100 PCT TYPE - CENTRIFUGAL ORIENTATION - VERTICAL FLOW RATE - 160 GPM SPEED - 3,500 RPM TDH - 105 FT BHP - 7.1 HP NPSH - FLOODED SUCTION EFFICIENCY - 60 PCT DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - 316 SS SAFETY CLASS - MNS SEISMIC CAT. - NONE DESIGN CODE -
224.16122	REGEN WST TST TK PUMP DRV	TYPE - HORSEPOWER - 7.5 HP SPEED - 3,600 RPM VOLTAGE - 460 V, 3 PHASE, 60 HZ
224.163	TANKS AND PRESSURE VESSELS	
224.1631	REGEN WASTE TANK	QUANTITY - 2 X 100 PCT ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 41,800 GAL DESIGN PRESS - 15 PSIG DESIGN TEMP - 200 F MATERIAL - 304 SS SAFETY CLASS - MNS SEISMIC CAT. - NONE DESIGN CODE - API 620
224.1632	REGEN WASTE TEST TANK	QUANTITY - 2 X 100 PCT ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 41,800 GAL DESIGN PRESS - 15 PSIG DESIGN TEMP - 200 F MATERIAL - 304 SS SAFETY CLASS - MNS SEISMIC CAT. - NONE DESIGN CODE - API 620

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.164	PURIF + FILTRATION EQUIP	
224.1641	REGEN WASTE FILTER	QUANTITY - 2 X 100 PCT TYPE - CARTRIDGE FLOW RATE - 25 GPM DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F DIFF. PRESS: CLEAN/DIRTY - 5/50 PSI RATING/SIZE - 98 PCT, 1 MICRON & LARGER MATERIAL - 304 OR 316 SS DIRT CAPACITY - SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
224.1642	REGEN WASTE EVAP COND DEMI	QUANTITY - 1 ORIENTATION - VERTICAL RESIN TYPE - H-OH SIZE - 3 FT DIA RESIN VOLUME - 28.3 CU FT FLOW RATE - 25 GPM FREEBOARD - BED DEPTH - 4 FT DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - 316 SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
224.1643	REGENERATION WASTE EVAP PK	INCLUDES: PUMPS, HEAT EXCHANGERS, TANKS CONTROLS, INSTRUMENTATION, AND ASSOCIATED PIPING AND VALVES QUANTITY - 2 X 100 PCT TYPE - CALANDRIA FLOW RATE - 25 GPM DISCHARGE PRESS - 45 PSIG DESIGN PRESS - DESIGN TEMP - MATERIAL - 316 SS SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.165	PIPING	INCLUDED IN ACCOUNT NUMBER 224.115
224.166	VALVES	
224.1662	CHECK	
224.1668	PLUG	
224.167	PIPING-MISC ITENS	
224.1671	HANGERS+SUPPORTS	
224.1672	POST DEMIN STRAINER	<p>QUANTITY - 1</p> <p>TYPE - "Y"</p> <p>FLOW RATE - 25 GPM</p> <p>DESIGN PRESS - 150 PSIG</p> <p>DESIGN TEMP - 200 F</p> <p>DIFF. PRESS:</p> <p>CLEAN/DIRTY - 0.5/1.5 PSI</p> <p>RATING/SIZE - 50 US MESH</p> <p>MATERIAL - SS</p> <p>DIRT CAPACITY -</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT. - NONE</p> <p>DESIGN CODE - ASME VIII</p>
224.1673	INSULATION	
224.168		
224.17	MISC RADWASTE EQUIP	
224.171	CHEM FEED PACKAGE	<p>INCLUDES: TANKS, PUMPS, PIPING, VALVES, AND INSTRUMENTATION</p> <p>QUANTITY - 1</p> <p>DESIGN PRESS - 15 PSIG</p> <p>DESIGN TEMP - 200 F</p> <p>MATERIAL - 316 SS</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT - NONE</p> <p>DESIGN CODE - ASME VIII</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.172	VACUUM DEGASIFIER PKG	<p>INCLUDES: DEGASIFIER, VACUUM PUMP, 2 DEGASIFIED WATER PUMPS, ASSOCIATED PIPING, VALVES & I&C</p> <p>QUANTITY - 1 FLOW - 65 GPM MATERIAL - SS SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE - ASME VIII</p>
224.18	INSTRUMENTATION + CONTROL	<p>TRANSMITTERS - 33 LOCAL INDICATORS - 28 BOARD MOUNTED INDICATORS - 35 RECORDERS - 1 FLOW ELEMENTS 3 CONDUCTIVITY ELEMENTS - 6 TEMPERATURE ELEMENTS - 8 TEMPERATURE TRANSMITTERS - 5 PROCESS SWITCHES - 31 MISCELLANEOUS - 52 ANNUNCIATORS - 46</p>
224.2	RAD GAS WASTE PROCESSING	
224.21	RAD GAS WASTE PROCESS SYS	
224.211	ROTATING MACHINERY	
224.2111	RAD GAS COMPRESSORS & DRVS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.21111	RAD GAS COMPRESSORS	INCLUDES: COOLEFS, PIPING AND VALVES QUANTITY - 2 X 100 PCT TYPE - CENTRIFUGAL DESIGN PRESS - 150 PSIG DESIGN TEMP - 180 F OPERATING TEMP - 70-130 F DESIGN SUCT PRES - 0.5 PSIG FLUID - N2 AT 140 F DESIGN FLOW - 40 SCFM DESIGN DISC PRES - 100 PSIG MATERIAL - SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE -
224.21112	RAD GAS COMPRESSOR DRIVE	TYPE - HORSEPOWER - SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
224.213	TANKS AND PRESSURE VESSELS	
224.2131	GAS SURGE TANK	QUANTITY - 1 ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 150 GAL DESIGN PRES. - 150 PSIG DESIGN TEMP - 180 F MATERIAL - CS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
224.2132	GAS DECAY TANKS	QUANTITY - 4 X 100 PCT ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 500 CU FT DESIGN PRES. - 150 PSIG DESIGN TEMP. - 180 F MATERIAL - CS SAFETY CLASS - 3 SEISMIC CAT - I DESIGN CODE - ASME III

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.214	PURIF + FILTRATION EQUIP	
224.2141	RECOMBINER PACKAGES	QUANTITY - 2 X 100 PCT TYPE - CATALYTIC INLET PRESS - 110 PSIG INLET TEMP - 140 F DESIGN FLOW RATE - 50 SCFM DESIGN H2 RECOMB RATE - 30 SCFM MATERIAL - SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE - ASME VIII
224.2142	GAS WASTE DRAIN FILTER	QUANTITY - 1 TYPE - CARTRIDGE FLOW RATE - 5 GPM DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F DIFF. PRESS - CLEAN/DIRTY - RATING/SIZE - 98 PCT 1 MICRON & LARGER MATERIAL - 304 OR 316 SS DIRT CAPACITY - SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
224.215	PIPING	
224.2151	2 IN + SMALLER	
224.21511	SS/NNS	
224.2152	2.5 IN + LARGER	
224.21521	SS/NNS	3 40S 7.7 1460 11,240 2,250
224.21522		
224.216	VALVES	
224.2162	CHECK	
224.2164	DIAPHRAGM	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.2165	RELIEF	
224.2168	PLUG	
224.217	PIPING-MISC ITEMS	
224.2171	HANGERS + SUPPORTS	
224.2172	GAS TRAPS	QUANTITY - 6 X 100 PCT DESIGN PRESS - 150 PSIG DESIGN TEMP - 600 F MATERIAL - CS SAFETY CLASS - MNS SEISMIC CAT - NONE DESIGN CODE -
224.218	INSTRUMENTATION + CONTROL	TRANSMITTERS - 6 LOCAL INDICATOR - 9 BOARD MTD IND - 4 PROCESS SWITCHES - 4 ANNUNCIATORS - 23 MISC - 60
224.3	SOLID WASTE SYSTEM	
224.31	SOLID WASTE PROCESSING SYS	
224.311	ROTATING MACHINERY	
224.3111	ACID METERING PUMP&DRIVE	ALLOWANCE
224.31111	ACID METERING PUMP	
224.31112	ACID METERING PUMP DRIVE	
224.3112	CAUSTIC METERING PUMP&DRV	ALLOWANCE
224.31121	CAUSTIC METERING PUMP	
224.31122	CAUSTIC METERING PUMP DRIVE	
224.3113	HYDRAULIC BAILER & DRIVE	ALLOWANCE
224.31131	HYDRAULIC BAILER	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.31132	HYDRAULIC BAILER DRIVE	
224.3114	SPENT RESIN SLUICE PMP&DRV	
224.31141	SPENT RESIN SLUICE PUMP	QUANTITY - 1 TYPE - ORIENTATION - FLOW RATE - 100GPM / 140GPM SPEED - TDH - 300 FT / 350 FT BHP - NPSH - EFFICIENCY - DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
224.31142	SPENT RESIN SLUICE PMP DRV	TYPE - HORSEPOWER - SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
224.3115	SPENT RESIN XFER PUMP&DRIVE	
224.31151	SPENT RESIN XFER PUMP	QUANTITY - 1 TYPE - ORIENTATION - FLOW RATE - SPEED - TDH - BHP - NPSH - EFFICIENCY - DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.31152	SPENT RESIN XFER PUMP DRIVE	TYPE - HORSEPOWER - SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
224.3116	CONCENTRATES TANK PMP&DRV	
224.31161	CONCENTRATES TANK PUMP	QUANTITY - 2 X 100 PCT TYPE - CENTRIFUGAL ORIENTATION - FLOW RATE - SPEED - TDH - BHP - NPSH - EFFICIENCY - DESIGN PRESS - 150 PSIG DESIGN TEMP - 200'F MATERIAL - SS SAFETY CLASS - NMS SEISMIC CAT. - NONE DESIGN CODE -
224.31162	CONCENTRATES TK PUMP DRIVE	TYPE - HORSEPOWER - SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
224.313	TANKS AND PRESSURE VESSELS	
224.3131	EVAPORATOR CONCENTRATES TK	QUANTITY 2 X 100 PCT ORIENTATION VERTICAL DIMENSIONS VOLUME 5,000 GAL DESIGN PRES. 150 PSIG DESIGN TEMP. 150 F MATERIAL 304 SS SAFETY CLASS NMS SEISMIC CAT. NONE DESIGN CODE AEME VIII

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.3132	SPENT RESIN STORAGE TANK	<p>QUANTITY 1</p> <p>ORIENTATION VERTICAL</p> <p>DIMENSIONS</p> <p>VOLUME - 350 CU FT</p> <p>DESIGN PRES. 100 PSIG</p> <p>DESIGN TEMP. 200 F</p> <p>MATERIAL SS</p> <p>SAFETY CLASS NNS</p> <p>SEISMIC CAT. NONE</p> <p>DESIGN CODE ASME VIII</p>
224.314	PURIF.+FILTRATION EQUIPT.	
224.3141	FILTERS	<p>QUANTITY - 1</p> <p>TYPE -</p> <p>FLOW RATE -</p> <p>DESIGN PRESS -</p> <p>DESIGN TEMP - 150 F</p> <p>DIFF. PRESS -</p> <p>CLEAN/DIRTY -</p> <p>RATING/SIZE - 98 PCT / 25 MICRON</p> <p>MATERIAL - SS</p> <p>DIRT CAPACITY -</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT. - NONE</p> <p>DESIGN CODE -</p>
224.315	PIPING	
224.3151	2IN. + SMALLER	
224.31511	SS/NNS	
224.3152	2.5IN + LARGER	
224.31521	SS/NNS	
224.316	SOLID WASTE PROCESS VALVES	
224.3161	GATE	
224.3162	CHECK	
224.3164	SAUNDERS WEIR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
224.3167	BALL	
224.317	PIPING-MISC ITEMS	
224.3171	HANGERS + SUPPORTS	
224.3172	INSULATION	
224.3173	SPECIALTIES	
224.318	INSTRUMENTATION + CONTROL	TRANSMITTERS - 20 LOCAL INDICATORS - 6 RECORDERS - 1 CONDUCTIVITY EL - 1 PROCESS SWITCHES - 9 ANNUNCIATORS - 12 MISC - 37
224.319	FOUNDATIONS/SKIDS	
224.3191	SOLIDIFICATION PACKAGE	
224.32	VOLUME REDUCTION	
224.321	VOLUME REDUCTION SYSTEM	
225.	FUEL HANDLING + STORAGE	
225.1	FUEL HANDLG TOOLS + EQUIP	
225.11	CRANES + HOISTS	
225.111	NEW + SPENT FUEL CRANE	QUANTITY ONE (1) CAPACITY 2 TONS SPAN 29 FT LIFT 25 FT SAFETY CLASS 3 SEISMIC CAT. 1
225.112	MONORAILS + HOISTS	
225.113	NEW FUEL ELEVATOR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
225.114	SPENT FUEL CASK CRANE	<p>CAPACITY MAIN 125 TON AUX. 5 TON (2 AUX HOOKS)</p> <p>BRIDGE SPAN 48 FT HOOK TRAVEL MAIN 90 FT AUX. 75 FT</p> <p>MAX SPEEDS BRIDGE 50 FPM TROLLEY 40 FPM MAIN HOIST 4 FPM AUX. HOIST 30 FPM</p> <p>SAFETY CLASS 3 SEISMIC CAT. I</p>
225.12	FUEL HANDLING TOOLS	
225.13	TRANSFER SYSTEMS	
225.131	TILTING MECHANISM	
225.132	FUEL XFER TUBE	
225.15	S.F. ENCAPSULATION FACILITY	
225.3	SERVICE PLATFORMS	
225.31	REACTOR SERVICE PLATFORM	NSSS SUPPLIED NONE
225.32	FUEL STOR POOL SERV PLATFM	
225.4	FUEL STOR, CLNG, + INSPEC EQ.	
225.41	NEW FUEL STORAGE RACKS	
225.42	SPENT FUEL STORAGE RACKS	<p>QUANTITY 230</p> <p>DESIGN TEMP</p> <p>DES. RADIA. DOSE</p> <p>MATERIAL</p> <p>SAFETY CLASS 3</p> <p>SEISMIC CAT. I</p> <p>DESIGN CODE</p>
225.43	SPENT FUEL POOL CLG+PURIF	
225.431	ROTATING MACHINERY	
225.4311	SPENT FUEL POOL PMPS+MOTOR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
225.43111	SPENT FUEL POOL PUMP	QUANTITY TWO (2) X 100 PCT TYPE CENTRIFUGAL ORIENTATION HORIZONTAL FLOW RATE 2,500 GPM SPEED TDH 50 FT BHP NPSH EFFICIENCY DESIGN PRES. 150 PSIG DESIGN TEMP. 225 F MATERIAL STAINLESS STEEL SAFETY CLASS 3 SEISMIC CAT. I DESIGN CODE ASME III, CLASS 3
225.43112	SPENT FUEL POOL PMP DRIVE	TYPE HORSEPOWER 60 HP SPEED VOLTAGE 460V, 3 PH, 60 HZ
225.4312	SPNT FL PL SKIMMER PMP+MOT	
225.43121	SPNT FL PL SKIMMER PUMPS	QUANTITY ONE (1) TYPE CENTRIFUGAL ORIENTATION HORIZONTAL FLOW RATE 120 GPM SPEED TDH 135 FT BHP NPSH EFFICIENCY DESIGN PRES. 150 PSIG DESIGN TEMP. 225 F MATERIAL STAINLESS STEEL SAFETY CLASS NMS SEISMIC CAT. NONE DESIGN CODE ASME VIII
225.43122	SPNT FL PL SKMR PUMP DRIVE	TYPE HORSEPOWER 10 HP SPEED VOLTAGE 460V, 3 PH, 60 HZ
225.432	HEAT XFER EQUIPMENT	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
225.4321	SPENT FUEL POOL HEAT XCHGR	QUANTITY ONE (1) TYPE ORIENTATION HEAT LOAD 2.17 E07 BTU/HR SURFACE AREA SHELL CONDITION DES.PRES/TEMP 150 PSIG/200 F TEMP IN/OUT FLOW RATE MATERIAL CARBON STEEL TUBE CONDITION QUANTITY SIZE DES.PRES/TEMP 150 PSIG/225 F TEMP IN/OUT FLOW RATE MATERIAL AUSTENITIC S.S. SAFETY CLASS 3 SEISMIC CAT. 1 DESIGN CODE ASME III, CLASS 3
225.434	PURIF + FILTRATION EQUIP	
225.4341	STRAINER	QUANTITY ONE (1) TYPE WYE FLOW RATE DESIGN PRES. DESIGN TEMP. DIFF. PRESS 2 PSI CLEAN/DIRTY RATING/SIZE MATERIAL DIRT CAPACITY SAFETY CLASS 3 SEISMIC CAT. I DESIGN CODE ASME III, CLASS 3
225.4342	SPENT FUEL POOL SKIMMERS	QUANTITY FIVE (5) TYPE SURFACE SKIMMER DESIGN TEMP 225 F MATERIAL CYCOLAC SAFETY CLASS NNS SEISMIC CATE NONE DESIGN CODE NONE

EQUIPMENT LIST - REPORT 1

JUL 9/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
225.4343	FUEL POOL PREFILTER	QUANTITY ONE (1) TYPE FLOW RATE 120 GPM DESIGN PRES. 150 PSIG DESIGN TEMP. 225 F DIFF. PRES. CLEAN/DIRTY 5 PSI / 20 PSI RATING/SIZE 95 PCT / 2 MICRONS MATERIAL STAINLESS STEEL DIRT CAPACITY SAFETY CLASS NBS SEISMIC CAT. NONE DESIGN CODE ASME VIII
225.4344	FUEL POOL POST FILTER	QUANTITY ONE (1) TYPE FLOW RATE 120 GPM DESIGN PRES. 150 PSIG DESIGN TEMP. 225 F DIFF. PRES. CLEAN/DIRTY 5 PSI / 20 PSI RATING/SIZE 95 PCT / 5 MICRONS MATERIAL STAINLESS STEEL DIRT CAPACITY SAFETY CLASS N4S SEISMIC CAT. NONE DESIGN CODE ASME VIII
225.4345	FUEL POOL DEMINERALIZER	QUANTITY ONE (1) ORIENTATION RESIN TYPE CATION: 50 PCT/STRONG ACID ANION: 50 PCT/STRONG BASE SIZE RESIN VOLUME 50 CU FT FLOW RATE 120 GPM FREEBOARD BED DEPTH DESIGN PRES. 150 PSI DESIGN TEMP. 225 F MATERIAL STAINLESS STEEL SAFETY CLASS N4S SEISMIC CAT. NONE DESIGN CODE ASME VIII
225.435	PIPING	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
225.4351	2 IN + SMALLER	
225.43511	SS/NNS	
225.4352	2.5 IN + LARGER	
225.43521	SS/NNS	
225.43522	SS/SC3	
225.436	SPENT FP CLG+PURIF SYS VLV	
225.4361	GATE VALVES	
225.4362	CHECK VALVES	
225.4363	GLOBE VALVES	
225.4364	SAUNDERS WEIR VALVES	
225.4365	RELIEF VALVES	
225.4366	BUTTERFLY	
225.4367	BALL	
225.4369	SPECIAL VALVES	
225.437	PIPING-MISC ITEMS	
225.4371	HANGERS AND SUPPORTS	
225.48	INSTRUMENTATION + CONTROL	TRANSMITTER LOCAL INDICATOR BOARD MOUNTED INDICATOR FLOW ELEMENT TEMP ELEMENT TEMP TRANSMITTER PROCESS SWITCH ANNUNCIATOR MISC
226.	OTHER REACTOR PLANT EQUIP	
226.1	INERT GAS SYS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.11	H2/N2 GAS SUPPLY SYS	
226.115	PIPING	
226.116	VALVES	
226.117	PIPING-MISC ITEMS	
226.118	INSTRUMENTATION+CONTROL	TRANSMITTER 3 LOCAL INDICATOR 14 PROCESS SWITCH 11 MISC 15
226.3	REACTOR MAKEUP WATER SYS	
226.31	ROTATING MACHINERY	
226.311	REACT M/U WATER PUMP&DRIVE	
226.3111	REACT M/U WATER PUMP	QUANTITY 2 TYPE CENTRIFUGAL ORIENTATION HORIZONTAL FLOW RATE 150 GPM SPEED TDH 360 FT BHP NPSH EFFICIENCY DESIGN PRES. 300 PSIG DESIGN TEMP. 200 F MATERIAL AUSTENITIC S.S. SAFETY CLASS 3 SEISMIC CAT. 1 DESIGN CODE ASME III, CLASS 3
226.3112	REACT M/U WATER PUMP DRIVE	TYPE HORSEPOWER 40 HP SPEED VOLTAGE 460V, 3 PH, 60 HZ
226.33	TANKS AND PRESSURE VESSELS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.331	REACTOR MAKEUP WTR TANK	<p>QUANTITY 1</p> <p>ORIENTATION VERTICAL</p> <p>DIMENSIONS</p> <p>VOLUME 112,000 GAL</p> <p>DESIGN PRES. ATMOSPHERIC</p> <p>DESIGN TEMP. 200 F</p> <p>MATERIAL AUSTENITIC S.S.</p> <p>INTERNAL DIAPHRAGM</p> <p>SAFETY CLASS 3</p> <p>SEISMIC CAT. I</p> <p>DESIGN CODE ASME III, CLASS 3</p>
226.35	PIPING	
226.351	2IN + SMALLER	
226.3511	SS/NNS	
226.3512	SS/SC2	
226.352	2.5IN + LARGER	
226.3521	SS/NNS	
226.3522	SS/SC2	
226.3523	SS/SC3	
226.36	VALVES	
226.361	GATE	
226.362	CHECK	
226.363	GLOBE	
226.364	SAUNDERS WEIR	
226.367	BALL	
226.369	SPECIAL VALVES	
226.3691	NEEDLE	
226.37	PIPING-MISC ITEMS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.371	HANGERS AND SUPPORTS	
226.38	INSTRUMENTATION + CONTROL	TRANSMITTER 2 LOCAL INDICATOR 4 BOARD MOUNTED INDICATOR 2 FLOW ELEMENT 1 PROCESS SWITCH 1 CONTROLLER 2
226.4	COOLANT TREATMENT&RECYCLE	
226.41	CHEM & VOLUME CONTROL	
226.411	ROTATING MACHINERY	
226.4111	CENTRIFUGAL CHRG PUMP&MTR	
226.41111	CENTRIFUGAL CHARGING PUMPS	QUANTITY 2 X 100 PCT TYPE CENTRIFUGAL ORIENTATION HORIZONTAL FLOW RATE 150 GPM SPEED TDH 5,800 FT BHP NPSH 30 FT EFFICIENCY DESIGN PRES. 2,800 PSIG DESIGN TEMP. 300 F MATERIAL S.S. SAFETY CLASS 2 SEISMIC CAT. YES DESIGN CODE ASME III, CLASS 2
226.41112	CENTRIFUGAL CHG PMP DRIVES	TYPE HORSEPOWER 600 HP SPEED VOLTAGE 4 KV, 3 PH, 60 HZ
226.4112	POSITIVE DISPL CHRG P+M	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.41121	POSITIVE DISPL CHG PUMP	QUANTITY 1 X 100 PCT TYPE ORIENTATION HORIZONTAL FLOW RATE 98 GPM SPEED TDH 5,800 FT BHP NPSH 30 FT EFFICIENCY DESIGN PRES. 2,800 PSIG DESIGN TEMP. 300 F MATERIAL SAFETY CLASS SEISMIC CAT. DESIGN CODE
226.41122	POSITIVE DISPL CHG PMP DRV	TYPE HORSEPOWER 200 HP SPEED VOLTAGE 460V, 3 PH, 60 HZ
226.4113	BORIC ACID XFER PUMP + MTR	
226.41131	BORIC ACID XFER PUMPS	QUANTITY 2 X 100 PCT TYPE CENTRIFUGAL / CANNED ORIENTATION HORIZONTAL FLOW RATE 35 / 100 GPM SPEED TDH 250 / 200 FT BHP NPSH 8 FT EFFICIENCY DESIGN PRES. 150 PSIG DESIGN TEMP. 250 F MATERIAL S.S. SAFETY CLASS 3 SEISMIC CAT. 1 DESIGN CODE ASME III, CLASS 3
226.41132	BORIC ACID XFER PMP DRIVES	TYPE HORSEPOWER 21 HP SPEED VOLTAGE 460V, 3 PH, 60 HZ
226.4114	CHILLER PUMP + MTR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN 4G AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.41141	CHILLER PUMPS	QUANTITY 2 X 100 PCT TYPE CENTRIFUGAL ORIENTATION HORIZONTAL FLOW RATE 400 GPM SPEED TDH 150 FT BHP NPSH 15 FT EFFICIENCY DESIGN PRES. 150 PSIG DESIGN TEMP. 200 F MATERIAL CARBON STEEL SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME V'II
226.41142	CHILLER PUMP DRIVES	TYPE HORSEPOWER 40 HP SPEED VOLTAGE 460V, 3 PH, 60 HZ
226.4115	BORON INJ M/U PUMP + MTR	
226.41151	BORON INJ M/U PUMP	QUANTITY 1 X 100 PCT TYPE CENTRIFUGAL / CANNED ORIENTATION HORIZONTAL FLOW RATE 35 / 100 GPM SPEED TDH 250 / 200 FT BHP NPSH EFFICIENCY DESIGN PRES. 150 PSIG DESIGN TEMP. 250 F MATERIAL S.S. SAFETY CLASS SEISMIC CAT. DESIGN CODE
226.41152	BORON INJ M/U PUMP DRIVE	TYPE HORSEPOWER 3.5 HP SPEED VOLTAGE 460V, 3 PH, 60 HZ
226.412	HEAT TRANS EQUIP	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.4121	MODERATING HX	<p>QUANTITY - 1 TYPE - SHELL AND U-TUBE ORIENTATION HORIZONTAL HEAT LOAD - 2.53 E06 BTU/HR SURFACE AREA - - SHELL CONDITION: DES.PRESS/TEMP - 300 PSIG / 200 F TEMP IN/OUT - 50 F / 92 F FLOW RATE - 120 GPM FLUID - BORATED RX COOLANT FOULING FACTOR - 0.0003 MATERIAL - S.S. TUBE CONDITION: QUANTITY - - SIZE - - DES.PRESS/TEMP - 300 PSIG / 200 F TEMP IN/OUT - 115 F / 73 F FLOW RATE - 120 GPM FLUID - BORATED RX COOLANT FOULING FACTOR - 0.0003 MATERIAL - S.S. DRY WEIGHT - 2600 LB SAFETY CLASS - 3 SEISMIC CAT. - I DESIGN CODE - ASME III, CLASS 3</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.4122	MAIN COOLANT PUMP SEAL H2O	<p>QUANTITY - 1</p> <p>TYPE - SHELL AND U-TUBE</p> <p>ORIENTATION - HORIZONTAL</p> <p>HEAT LOAD - 2.4 E06 BTU/HR</p> <p>SURFACE AREA - -</p> <p>SHELL CONDITION:</p> <p>DES.PRESS/TEMP - 150 PSIG / 250 F</p> <p>TEMP IN/OUT - 105 F / 118 F</p> <p>FLOW RATE - 372 GPM</p> <p>FLUID - C.C.W.</p> <p>FOULING FACTOR - 0.0005</p> <p>MATERIAL - C.S.</p> <p>SAFETY CLASS - 3</p> <p>SEISMIC CAT. - I</p> <p>DESIGN CODE - ASME III, CLASS 3</p> <p>TUBE CONDITION:</p> <p>QUANTITY - -</p> <p>SIZE - -</p> <p>DES.PRESS/TEMP - 150 PSIG / 250 F</p> <p>TEMP IN/OUT - 172 F / 115 F</p> <p>FLOW RATE - 85 GPM</p> <p>FLUID - BORATED RX COOLANT</p> <p>FOULING FACTOR - 0.0003</p> <p>MATERIAL - S.S.</p> <p>SAFETY CLASS - 2</p> <p>SEISMIC CAT. - I</p> <p>DESIGN CODE - ASME III, CLASS 2</p> <p>DRY WEIGHT - 2700 LB</p>
226.4123	CHILLER	<p>QUANTITY - 1</p> <p>TYPE - CENTRIFUGAL</p> <p>TWO PASS, WATER</p> <p>CAPACITY - 138 TONS</p> <p>COOLING WATER FLOW - 219,000 LB/HR</p> <p>TEMP - 95 F</p> <p>CHILLED WATER FLOW - 175,000 LB/HR</p> <p>TEMP - 39 F</p> <p>DRY WEIGHT - 9,590 LB</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

226.4124 REGENERATIVE HX

QUANTITY - 1
TYPE - COUNTER FLOW HAIRPIN
ORIENTATION - HORIZONTAL
HEAT LOAD - 11.0 E06 BTU/HR
SURFACE AREA - -
SHELL CONDITION:
DES.PRESS/TEMP - 2485 PSIG / 650 F
TEMP IN/OUT - 560 F / - F
FLOW RATE - 75 GPM
FLUID - BORATED RX COOLANT
FOULING FACTOR - 0.0005
MATERIAL - S.S.
TUBE CONDITION:
QUANTITY - -
SIZE - -
DES.PRESS/TEMP - 3100 PSIG / 650 F
TEMP IN/OUT - 130 F / - F
FLOW RATE - 55 GPM
FLUID - BORATED RX COOLANT
FOULING FACTOR - 0.0003
MATERIAL - S.S.
DRY WEIGHT - 3170 LB
SAFETY CLASS - 2
SEISMIC CAT. I
DESIGN CODE - ASME III, CLASS 2

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.4125	LETDOWN(NON-REGEN) HX	<p>QUANTITY - 1</p> <p>TYPE - SHELL AND U-TUBE</p> <p>ORIENTATION - HORIZONTAL</p> <p>HEAT LOAD - 16.1 E06 BTU/HR</p> <p>SURFACE AREA - -</p> <p>SHELL CONDITION:</p> <p>DES.PRESS/TEMP - 150 PSIG / 250 F</p> <p>TEMP IN/OUT - 105 F / 137 F</p> <p>FLOW RATE - 1000 GPM</p> <p>FLUID - C.C.W.</p> <p>FOULING FACTOR - 0.0005</p> <p>MATERIAL - C.S.</p> <p>SAFETY CLASS - 3</p> <p>SEISMIC CAT. - I</p> <p>DESIGN CODE - ASME III, CLASS 3</p> <p>TUBE CONDITION:</p> <p>QUANTITY - -</p> <p>SIZE - -</p> <p>DES.PRESS/TEMP - 600 PSIG / 400 F</p> <p>TEMP IN/OUT - 380 F / 115 F</p> <p>FLOW RATE - 120 GPM</p> <p>FLUID - BORATED RX COOLANT</p> <p>FOULING FACTOR - 0.0003</p> <p>MATERIAL - S.S.</p> <p>SAFETY CLASS - 2</p> <p>SEISMIC CAT. - I</p> <p>DESIGN CODE - ASME III, CLASS 2</p> <p>DRY WEIGHT - 5000 LB</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.4126	EXCESS LETDOWN HX	<p>QUANTITY - 1</p> <p>TYPE - SHELL AND U-TUBE</p> <p>ORIENTATION HORIZONTAL</p> <p>HEAT LOAD - 5.2 E06 BTU/HR</p> <p>SURFACE AREA - -</p> <p>SHELL CONDITION:</p> <p>DES.PRESS/TEMP - 150 PSIG / 250 F</p> <p>TEMP IN/OUT - 105 F / 145 F</p> <p>FLOW RATE - 260 GPM</p> <p>FLUID - C.C.W.</p> <p>FOULING FACTOR - 0.0005</p> <p>MATERIAL - C.S.</p> <p>TUBE CONDITION:</p> <p>QUANTITY - -</p> <p>SIZE - -</p> <p>DES.PRESS/TEMP - 2485 PSIG / 650 F</p> <p>TEMP IN/OUT - 560 F / 165 F</p> <p>FLOW RATE - 25 GPM</p> <p>FLUID - BORATED RX COOLANT</p> <p>FOULING FACTOR - 0.0003</p> <p>MATERIAL - S.S.</p> <p>SAFETY CLASS - 2</p> <p>NOTE: SHELL SIDE TREATED AS NNS FOR INTERFACE PURPOSES</p> <p>SEISMIC CAT. - I</p> <p>DESIGN CODE - ASME III, CLASS 2</p> <p>DRY WEIGHT - 1800 LB</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.4127	LETDOWN CHILLER HX	<p>QUANTITY - 1</p> <p>TYPE - SHELL AND U-TUBE</p> <p>ORIENTATION - HORIZONTAL</p> <p>HEAT LOAD - 1.65 E06 BTU/HR</p> <p>SURFACE AREA - -</p> <p>SHELL CONDITION:</p> <p>DES.PRESS/TEMP - 150 PSIG / 200 F</p> <p>TEMP IN/OUT - 39 F / 48 F</p> <p>FLOW RATE - 352 GPM</p> <p>FLUID - DEMIN. WATER</p> <p>FOULING FACTOR - 0.0005</p> <p>MATERIAL - C.S.</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT. - I</p> <p>DESIGN CODE - ASME VIII</p> <p>TUBE CONDITION:</p> <p>QUANTITY - -</p> <p>SIZE - -</p> <p>DES.PRESS/TEMP - 300 PSIG / 200 F</p> <p>TEMP IN/OUT - 73 F / 45 F</p> <p>FLOW RATE - 120 GPM</p> <p>FLUID - BORATED RX COOLANT</p> <p>FOULING FACTOR - 0.0003</p> <p>MATERIAL - S.S.</p> <p>SAFETY CLASS - 3</p> <p>SEISMIC CAT. - I</p> <p>DESIGN CODE - ASME III, CLASS 3</p> <p>DRY WEIGHT - 3300 LB</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.4128	LETDOWN REHEAT HX	<p>QUANTITY - 1</p> <p>TYPE - SHELL AND U-TUBE</p> <p>ORIENTATION - HORIZONTAL</p> <p>HEAT LOAD - 1.49 E06 BTU/HR</p> <p>SURFACE AREA - -</p> <p>SHELL CONDITION:</p> <p>DES.PRESS/TEMP - 300 PSIG / 200 F</p> <p>TEMP IN/OUT - 115 F / 140 F</p> <p>FLOW RATE - 120 GPM</p> <p>FLUID - BORATED RX COOLANT</p> <p>FOULING FACTOR - 0.0003</p> <p>MATERIAL - S.S.</p> <p>SAFETY CLASS - 3</p> <p>SEISMIC CAT. - I</p> <p>DESIGN CODE - ASME III, CLASS 3</p> <p>TUBE CONDITION:</p> <p>QUANTITY - -</p> <p>SIZE - -</p> <p>DES.PRESS/TEMP - 600 PSIG / 400 F</p> <p>TEMP IN/OUT - 280 F / 247 F</p> <p>FLOW RATE - 90 GPM</p> <p>FLUID - BORATED RX COOLANT</p> <p>FOULING FACTOR - 0.0003</p> <p>MATERIAL - S.S.</p> <p>SAFETY CLASS - 2</p> <p>SEISMIC CAT. - I</p> <p>DESIGN CODE - ASME III, CLASS 2</p> <p>DRY WEIGHT - 420 LB</p>
226.413	TANKS & PRESS VESSELS	
226.4131	VOLUME CONTROL TANK	<p>QUANTITY 1</p> <p>ORIENTATION VERTICAL</p> <p>DIMENSIONS -</p> <p>VOLUME 400 CU FT</p> <p>DRY WEIGHT 4,750 LB</p> <p>DESIGN PRES. 75 PSIG</p> <p>DESIGN TEMP. 250 F</p> <p>MATERIAL S.S.</p> <p>SAFETY CLASS 2</p> <p>SEISMIC CAT. I</p> <p>DESIGN CODE ASME III, CLASS 2</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.4132	BORIC ACID TANKS	QUANTITY 2 ORIENTATION VERTICAL DIMENSIONS - VOLUME 24,000 GAL DESIGN PRES. ATMOSPHERIC DESIGN TEMP. 200 F MATERIAL S.S. SAFETY CLASS 3 SEISMIC CAT. I DESIGN CODE ASME III, CLASS 3
226.4133	CHILLER SURGE TANK	QUANTITY 1 ORIENTATION VERTICAL DIMENSIONS - VOLUME 500 GAL DRY WEIGHT 1,300 LB DESIGN PRES. ATMOSPHERIC DESIGN TEMP. 200 F MATERIAL C.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME VIII
226.4134	BORIC ACID BATCH TANK	QUANTITY 1 ORIENTATION VERTICAL DIMENSIONS - VOLUME 800 GAL DRY WEIGHT 3,000 LB DESIGN PRES. ATMOSPHERIC DESIGN TEMP. 300 F MATERIAL S.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME VIII

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.4135	CHEMICAL MIXING TANK	<p>QUANTITY 1</p> <p>ORIENTATION VERTICAL</p> <p>DIMENSIONS</p> <p>VOLUME 5 GAL</p> <p>DRY WEIGHT 80 LB</p> <p>DESIGN PRES. 150 PSIG</p> <p>DESIGN TEMP. 200 F</p> <p>MATERIAL S.S.</p> <p>SAFETY CLASS NNS</p> <p>SEISMIC CAT. NONE</p> <p>DESIGN CODE ASME VIII</p>
226.4136	RESIN FILL TANK	<p>QUANTITY 1</p> <p>ORIENTATION VERTICAL</p> <p>DIMENSIONS -</p> <p>VOLUME 8 GAL</p> <p>DESIGN PRES. ATMOSPHERIC</p> <p>DESIGN TEMP. 200 F</p> <p>MATERIAL C.S.</p> <p>SAFETY CLASS NNS</p> <p>SEISMIC CAT. NONE</p> <p>DESIGN CODE ASME VIII</p>
226.4137	RCP SEAL STANDPIPE	<p>QUANTITY 1</p> <p>ORIENTATION VERTICAL</p> <p>DIMENSIONS</p> <p>VOLUME 21.9 GAL</p> <p>DESIGN PRES. -</p> <p>DESIGN TEMP. -</p> <p>MATERIAL S.S.</p> <p>SAFETY CLASS NNS</p> <p>SEISMIC CAT. NONE</p> <p>DESIGN CODE ASME VIII</p>
226.414	PURIF & FILTRATION EQUIP	

EQUIPMENT LIST - REPORT 1

05.29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.4141	MIXED BED DEMINS	QUANTITY 2 X 100 PERCENT ORIENTATION VERTICAL RESIN TYPE CATION AND ANION SIZE - RESIN VOLUME 30 CU FT FLOW RATE 120 GPM FREEBOARD 43 CU FT BED DEPTH - DESIGN PRES. 300 PSIG DESIGN TEMP. 250 F MATERIAL S.S. DRY WEIGHT 1565 LB SAFETY CLASS 3 SEISMIC CAT. I DESIGN CODE ASME III, CLASS 3
226.4142	CATION DEMINS	QUANTITY 1 ORIENTATION VERTICAL RESIN TYPE CATION SIZE - RESIN VOLUME 30 CU FT FLOW RATE 120 GPM FREEBOARD 43 CU FT BED DEPTH - DESIGN PRES. 300 PSIG DESIGN TEMP. 250 F MATERIAL S.S. DRY WEIGHT 1565 LB SAFETY CLASS 3 SEISMIC CAT. I DESIGN CODE ASME III, CLASS 3

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.4143	PROCESS FILTERS	<p>QUANTITY 1 X REACTOR COOLANT 1 X SEAL WATER RETURN 1 X BORIC ACID</p> <p>TYPE DISPOSABLE CARTRIDGE</p> <p>FLOW RATE 250 GPM</p> <p>DESIGN PRES. 300 PSIG</p> <p>DESIGN TEMP. 250 F</p> <p>DIFF. PRES.</p> <p>CLEAN/DIRTY 5 PSI / 20 PSI</p> <p>RATING/SIZE 98 PCT / 25 MICRON</p> <p>MATERIAL S.S.</p> <p>DIRT CAPACITY</p> <p>SAFETY CLASS 2 (BORIC ACID - 3)</p> <p>SEISMIC CAT. I</p> <p>DESIGN CODE ASME III, CLASS 2 (BORIC ACID - 3)</p>
226.4144	SEAL WATER INJECTION FILTE	<p>QUANTITY 2 X 100 PERCENT</p> <p>TYPE BASKET</p> <p>FLOW RATE 80 GPM</p> <p>DESIGN PRES. 3,100 PSIG</p> <p>DESIGN TEMP. 250 F</p> <p>DIFF. PRES. -</p> <p>CLEAN/DIRTY 7 PSI / 20 PSI</p> <p>RATING/SIZE 98 PCT / 5 MICRON</p> <p>MATERIAL S.S.</p> <p>DIRT CAPACITY -</p> <p>SAFETY CLASS 2</p> <p>SEISMIC CAT. I</p> <p>DESIGN CODE ASME III, CLASS 2</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1130 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.4145	THERMAL REGENERATION DEMIN	QUANTITY 5 X 25 PERCENT ORIENTATION VERTICAL RESIN TYPE - SIZE - RESIN VOLUME 74.3 CU FT FLOW RATE 250 GPM FREEBOARD - BED DEPTH - DESIGN PRES. 300 PSIG DESIGN TEMP. 250 F MATERIAL S.S. DRY WEIGHT 2,500 LB SAFETY CLASS 3 SEISMIC CAT. I DESIGN CODE ASME III, CLASS 3
226.415	PIPING	
226.4151	2IN + SMALLER	
226.41511	SS/NNS	
226.41512	SS/SC1	
226.41513	SS/SC2	
226.41514	SS/SC3	
226.4152	2.5IN + LARGER	
226.41521	SS/NNS	
226.41522	SS/SC1	
226.41523	SS/SC2	
226.41524	SS/SC3	
226.416	CVCS VALVES	
226.4161	GATE	
226.4162	CHECK	
226.4163	GLOBE	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.4164	DIAPHRAGM	
226.4165	RELIEF	
226.4166	BUTTERFLY	
226.4169	SPECIAL VALVES	
226.41691	NEEDLE	
226.41692	THREE WAY	
226.417	PIPING-MISC ITEMS	
226.4171	HANGERS + SUPPORTS	
226.4172	INSULATION	
226.4173	SPECIALTIES	
226.41731	BORIC ACID BLENDER	QUANTITY 1 TYPE INLINE STATIC DESIGN PRESS 150 PSIG DESIGN TEMP 250 F MATERIAL S.S. SAFETY CLASS NNS SEISMIC CATE NONE DESIGN CODE ASME VIII
226.41732	LET DOWN ORIFICES	QUANTITY 3 FLOW RATE NO. 1 - 45 GPM NO. 2 - 60 GPM NO. 3 - 75 GPM DESIGN PRESS 2,485 PSIG DESIGN TEMP 650 F MATERIAL S.S.
226.41733	RC PUMP SEAL BYPASS ORIFIC	QUANTITY 4 DESIGN PRESS 2,500 PSIA DESIGN TEMP 250 F DES. FLOW RATE 1 GPM DES. DIFF PRESS 300 PSI MATERIAL S.S.

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.418	INSTRUMENTATION+CONTROL	TRANSMITTER 21 LOCAL INDICATOR 12 BOARD MOUNTED INDICATOR 78 FLOW ELEMENT 16 TEMP ELEMENT 8 TEMP TRANSMITTER 3 PROCESS SWITCH 29 CONTROLLER 4 ANNUNCIATOR 35 BORONOMETER 1 MISC 56
226.419	FOUNDATIONS/SKIDS	
226.4191	BATCHING TANK AGITATOR	QUANTITY 1 FLUID 4 PCT H3803 MATERIAL S.S.
226.4192	BORON CONCEN MESUR UNIT	RANGE 0 - 5,000 PPM BORON +- 10 PPM TO 1,800 PPM +- 1.25 PCT FROM 1,800 PPM TO 5,000 PPM
226.42	BORON RECYCLE SYSTEM	
226.421	ROTATING MACHINERY	
226.4211	RECYCLE EVAP FD PUMPS+MTRS	
226.42111	RECYCLE EVAP FEED PUMP	QUANTITY 2 X 100 PCT TYPE CENTRIFUGAL / CANNED ORIENTATION HORIZONTAL FLOW RATE 30 / 100 GPM SPEED TDH 320 / 250 FT BHP 4 / 9.4 HP NPSH 15 FT EFFICIENCY 60 / 70 PCT DESIGN PRES. 150 PSIG DESIGN TEMP. 130 F MATERIAL SS SAFETY CLASS 3 SEISMIC CAT. I DESIGN CODE

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.42112	RECYCLE EVAP FEED PMP DRVE	TYPE HORSEPOWER 10 HP SPEED VOLTAGE 460 V, 3 PH, 60 HZ
226.4212	RECYCLE TST TK P'MPS&DRIVE	
226.42121	RECYCLE TST TANK PUMPS	QUANTITY 2 X 100 PCT TYPE ORIENTATION FLOW RATE 200 GPM SPEED TDH BHP NPSH EFFICIENCY DESIGN PRES. 125 PSIG DESIGN TEMP. 130 F MATERIAL 304 SS SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
226.42122	RECYCLE TST TK PUMP DRIVES	TYPE HORSEPOWER SPEED VOLTAGE
226.423	TANKS AND PRESSURE VESSELS	
226.4231	RECYCLE HOLDUP TANKS	QUANTITY - 2 X 100 PCT ORIENTATION - VERTICAL DIMENSIONS - VOLUME 56,000 GAL DESIGN PRESS - ATMOSPHERIC DESIGN TEMP - 200 F MATERIAL - SS WITH LINER SAFETY CLASS - 3 SEISMIC CAT. - I DESIGN CODE - ASME SECTION III

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.4232	RECYCLE EVAP REAGENT TKS	QUANTITY - 2 X 100 PCT ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 5 GAL DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
226.4233	RECYCLE TEST TANKS	QUANTITY - 2 X 100 PCT ORIENTATION - DIMENSIONS - VOLUME - 18,000 GAL DESIGN PRESS - ATMOSPHERIC DESIGN TEMP - 200 F MATERIAL - 304 SS WITH DIAPH. SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
226.424	PURIF. + FILTRATION EQUI	
226.4241	RECYCLE HOLDUP TANK DEMIN	QUANTITY - 2 X 100 PCT TYPE - FLUSHABLE ORIENTATION - VERTICAL RESIN TYPE - IRN-150 SIZE - RESIN VOLUME - 30 CU FT FLOW RATE - 120 GPM FREEBOARD - BED DEPTH - DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - SS SAFETY CLASS - 3 SEISMIC CAT. - DESIGN CODE - ASME III

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.4242	RECYCLE EVAP COND DEMIN	QUANTITY - 1 TYPE - FLUSHABLE ORIENTATION - VERTICAL RESIN TYPE - IRN-78 SIZE - - RESIN VOLUME - 20 CU FT FLOW RATE - 35 GPM FREEBOARD - - BED DEPTH - - DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
226.4243	RECYCLE EVAP FEED FILTER	QUANTITY - 2 X 100 PCT TYPE - DISPOSABLE CARTRIDGE FLOW RATE - 150 GPM DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F DIFF. PRESS - - CLEAN/DIRTY - - RATING/SIZE - 98 PCT / 5 MICRON MATERIAL - SS DIRT CAPACITY - - SAFETY CLASS - 3 SEISMIC CAT. - I DESIGN CODE - ASME III
226.4244	RECYCLE EVAP COND FILTER	QUANTITY - 1 TYPE - DISPOSABLE CARTRIDGE FLOW RATE - 35 GPM DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F DIFF. PRESS - - CLEAN/DIRTY - - RATING/SIZE - 98 PCT / 25 MICRON MATERIAL - SS DIRT CAPACITY - - SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.4245	RECYCLE EVAP CONCEN FILTER	QUANTITY - 1 TYPE - DISPOSABLE CARTRIDGE FLOW RATE - 35 GPM DESIGN PRESS - 50 PSIG DESIGN TEMP - 200 F DIFF. PRESS - - CLEAN/DIRTY - - RATING/SIZE - 98 PCT / 25 MICRON MATERIAL - SS DIRT CAPACITY - - SAFETY CLASS - MNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
226.4246	RECYCLE EVAPORATOR PKG	QUANTITY - 1 STEAM PRESS - 50 PSIG FLOW - 15 GPM FEED CONC - 10-2,500 PPM BORON DISCHARGE CONC - 7,000-21,000 PPM BORON MATERIAL - SS SAFETY CLASS - 3 SEISMIC CAT - I DESIGN CODE - ASME III
226.425	PIPING	ALLOWANCE
226.4251	2 IN + SMALLER	
226.42511	SS/N	
226.42512	SS/MNS	
226.4252	2.5 IN & LARGER	
226.42521	SS/MNS	
226.426	BORON RECYCLE SYS VALVES	
226.4261	GATE	
226.4262	CHFK	
226.4263	GLOBE	
226.4264	DIAPHRAGM	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.4265	RELIEF	
226.4269	SPECIAL VALVES	
226.42692	THREE - WAY	
226.427	PIPING-MISC ITEMS	
226.4271	HANGERS & SUPPORTS	
226.4272	INSULATION	
226.4273	SPECIALTIES	
226.428	INSTRUMENTATION+CONTROL	TRANSMITTERS - 28 LOCAL INDICATOR - 28 BOARD MTD IND - 69 RECORDERS - 5 FLOW ELEMENTS - 10 COND ELEMENTS - 2 TEMP ELEMENTS - 12 TEMP TRANSMITTERS - 8 PROCESS SWITCHES - 95 CONTROLLERS - 9 ANNUNCIATORS - 63 MISC - 28
226.6	FLUID LEAK DETECTION SYS	
226.68	INSTRUMENTATION+CONTROL	SUMP LEVEL MONITOR - 2 CH AIRBORNE PART RAD MON - 2 CH AIRBORNE GAS RAD MON - 2 CH MISC - 16
226.7	AUX COOL SYS	
226.71	NUC SERV WTR SYS	
226.711	ROTATING MACHINERY	
226.7111	SAFEGUARDS CLG TWR PMP&DRV	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.71111	SAFEGUARDS CLG TWR PUMP	QUANTITY - 2 X 100 PCT TYPE - CENTRIFUGAL ORIENTATION - VERTICAL FLOW RATE - 13,000 GPM SPEED - 1,180 RPM TDH - 170 FT BHP - 740 HP NPSH - 23 FT EFFICIENCY - 80.2 PCT DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - STAINLESS STEEL (316L) SAFETY CLASS - 3 SEISMIC CAT. - I DESIGN CODE - ASME III, CLASS 3
226.71112	SAFEGUARDS CLG TWR PMP DRV	TYPE - HORSEPOWER - 800 HP SPEED - VOLTAGE - 4000 V, 3 PHASE, 60 HZ
226.712	HEAT TRANS EQUIP	
226.7121	UHS CLG TOWER	QUANTITY - 2 X 100 PCT TYPE - MECHANICAL DRAFT FILL - CERAMIC OR DRY HEAT LOAD - 217.6 E06 BTU/HR WET BULB TEMP - 78 F DRY BULB TEMP - 107 F APPROACH - 17 F NO. OF FANS 1 FAN MOTOR: TYPE - HORSEPOWER - 250 HP SPEED - VOLTAGE - 4 KV, 3 PH, 60 HZ SAFETY CLASS - 3 SEISMIC CAT. - I DESIGN CODE - ASME III, CLASS 3
226.715	PIPING	
226.7151	2IN & SMALLER	
226.71511	CS/N	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.71512	CS/NNS	
226.7152	2.5IN & L RGER	
226.71521	CS/SC 3	
226.716	VALVES	
226.7162	CHECK	
226.7163	GLOBE	
226.7165	RELIEF	
226.7166	BUTTERFLY	
226.717	PIPING-MISC ITEMS	
226.7171	HANGERS & SUPPORTS	
226.7172	INSULATION	
226.7173	SPECIALTIES	
226.7174	PIPE TRENCHING	
226.718	INSTRUMENTATION+CONTROL	TRANSMITTERS - 70 LOCAL INDICATORS - 24 BOARD MOUNTED INDICATORS - 61 FLOW ELEMENTS - 19 CONDUCTIVITY ELEMENTS - 2 TEMP ELEMENTS - 40 TEMP TRANSMITTERS - 33 PROCESS SWITCHES - 21 ANNUCIATORS - 44 CONTROLLERS - 4 MISCELLANEOUS - 2
226.72	PRI CMPNT COOLING WTR	
226.721	ROTATING MACHINERY	
226.7211	PRIM CMPNT PUMP + MTR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.72111	PRIM CMPNT PUMP	<p>QUANTITY - 4 X 100 PCT DURING POST ACCIDENT RECIRCULATION (4 X 50 PCT DURING NORMAL OPERATIONS)</p> <p>TYPE - CENTRIFUGAL</p> <p>ORIENTATION - HORIZONTAL</p> <p>FLOW RATE - 11,000 GPM</p> <p>SPEED - 1,200 RPM</p> <p>TDH - 200 FT</p> <p>BHP - 650 HP</p> <p>NPSH - 22 FT</p> <p>EFFICIENCY - 86 PCT</p> <p>DESIGN PRESS - 150 PSIG</p> <p>DESIGN TEMP - 200 F</p> <p>MATERIAL - CAST CARBON STEEL</p> <p>SAFETY CLASS - 3</p> <p>SEISMIC CAT. - I</p> <p>DESIGN CODE - ASME III, CLASS 3</p>
226.72112	PRIM CMPNT PUMP DRIVE	<p>TYPE -</p> <p>HORSEPOWER - 700 HP</p> <p>SPEED -</p> <p>VOLTAGE - 4000 V, 3 PHASE, 60 HZ</p>
226.722	HEAT TRANS EQUIP	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.7221	PRI CMFNT HX	QUANTITY - 2 X 100 PCT TYPE - SPLIT FLOW SHELL & TUBE ORIENTATION VERTICAL HEAT LOAD 194.2 E06 BTU/HR SURFACE AREA - SHELL CONDITION: DES. PRESS/TEMP - 150 PSIG/200 F TEMP IN/OUT - FLOW RATE - MATERIAL - CARBON STEEL SAFETY CLASS - 3 DESIGN CODE - ASME III, CLASS 3 TUBE CONDITION: QUANTITY - SIZE - DES. PRESS/TEMP - 150 PSIG/200 F TEMP IN/OUT - FLOW RATE - MATERIAL - CU-NI SAFETY CLASS - 3 DESIGN CODE - ASME III, CLASS 3 SEISMIC CAT. - I
226.723	TANKS & PRESS VESSELS	
226.7231	WATER HEAD TANK	QUANTITY - 2 ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 2000 GAL DESIGN PRESS - 150 PSIG DESIGN TEMP - 200 F MATERIAL - CARBON STEEL SAFETY CLASS - 3 SEISMIC CAT. - I DESIGN CODE - ASME III, CLASS 3
226.725	PIPING	
226.7251	2IN + SMALLER	
226.72511	CS/SC3	
226.7252	2.5IN + LARGER	
226.72521	CS/NNS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.72522	CS/SC2	
226.72523	CS/SC3	
226.726	VALVES	
226.7261	GATE	
226.7262	CHECK	
226.7263	GLOBE	
226.7265	RELIEF	
226.7266	BUTTERFLY	
226.727	PIPING-MISC ITEMS	
226.7271	HANGERS + SUPPORTS	
226.7272	INSULATION	
226.7273	SPECIALTIES	
226.728	INSTRUMENTATION+CONTROL	TRANSMITTERS - 29 LOCAL INDICATORS - 102 BOARD MOUNTED INDICATORS - 77 RECORDERS - 2 FLOW ELEMENTS - 30 TEMP ELEMENTS - 32 TEMP TRANSMITTERS - 10 PROCESS SWITCHES - 34 CONTROLLERS - 6 ANNUNCIATORS - 37 MISCELLANEOUS - 55
226.8	MAINTENANCE EQUIPMENT	
226.81	REMOTELY CONTROLLED TOOLS	
226.82	RADIOACTIVE MAINT FACIL	
226.83	PORTABLE SHIELDING	
226.84	TOOLS & EQUIP FOR REACT VE	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.841	VESSEL HARDWARE	
226.8411	CLOSURE STUD - FLANGERS	
226.8412	ELONGATION MEASURING DEVICE	
226.8413	STUD HANDLINE TOOL	
226.8414	HEAD GUIDE STUDS	
226.842	SEALWELD CUTTING+WELDING	
226.843	LIFTING FIXTURES	
226.85	CORE-TOOLS + FIXTURES	
226.851	LIFTING FIXTURES & DEVICES	
226.86	DECONTAMINATION EQUIPMENT	
226.861	ROTATING MACHINERY	
226.8611	DRAIN COLLECTION PUMP+MTR	
226.86111	DRAIN COLLECTION PUMP	QUANTITY - 1 TYPE - ORIENTATION - FLOW RATE - 110 GPM SPEED - TDH - 170 FT BHP - NPSH - EFFICIENCY - DESIGN PRESS - 150 PSIG DESIGN TEMP - 225 F MATERIAL - SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
226.86112	DRAIN COLLECTION PMP DRIVE	TYPE - HORSEPOWER - SPEED - VOLTAGE -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.8612	BARREL PUMPS + MOTORS	
226.86121	BARREL PUMPS	QUANTITY - 5 TYPE - ORIENTATION - FLOW RATE - 25 GPM SPEED - TDH - BHP - NPSH - EFFICIENCY - DESIGN PRESS - DESIGN TEMP - MATERIAL - SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - SPECIAL REQUIREMENTS - 100 PSIG AIR SUPPLY @ 37 SCFM PER PUMP
226.86122	BARREL PUMP DRIVES	TYPE - HORSEPOWER - SPEED - VOLTAGE -
226.862	HEAT TRANSFER EQUIPMENT	
226.8621	WATER HEATER	QUANTITY - 1 TYPE - ELECTRIC CAPACITY - 500 GAL HEAT RATE - 100 F TEMP RISE @ 250 GPM SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
226.863	TANKS AND PRESSURE VESSELS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.8631	DRAIN COLLECTION TANK	<p>QUANTITY - 1</p> <p>ORIENTATION -</p> <p>DIMENSIONS -</p> <p>VOLUME - 5000 GAL</p> <p>DESIGN PRESS - ATMOS</p> <p>DESIGN TEMP - 240 F</p> <p>MATERIAL - 304L SS LINED</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT. - NONE</p> <p>DESIGN CODE -</p> <p>SPECIAL REQUIREMENTS - FOUR LIQUID SPARGERS (3/8 IN. EDUCTORS) OF 100 FT ALLOWABLE PRESSURE DROP AT 60 GPM</p>
226.8632	AGITATED VESSEL CLEANER	<p>QUANTITY - 1</p> <p>ORIENTATION -</p> <p>DIMENSIONS - 106 IN.X 57 IN.X 48 IN.</p> <p>VOLUME - 740 GAL</p> <p>DESIGN PRESS - ATMOS</p> <p>DESIGN TEMP - 225 F</p> <p>MATERIAL -</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT. - NONE</p> <p>DESIGN CODE -</p> <p>SPECIAL REQUIREMENTS - TWO AGITATORS, 159 LB/HR OF STEAM @ 50 PSIG FOR HEATING</p>
226.864	PURIF + FILTRATION EQUIPMT	
226.8641	DRAIN FILTER	<p>QUANTITY - 1</p> <p>TYPE - DISPOSABLE CARTRIDGE</p> <p>FLOW RATE - 50 GPM</p> <p>DESIGN PRESS - 150 PSIG</p> <p>DESIGN TEMP - 225 F</p> <p>DIFF. PRESS</p> <p>CLEAN/DIRTY -</p> <p>RATING/SIZE -</p> <p>MATERIAL -</p> <p>DIRT CAPACITY -</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT. - NONE</p> <p>DESIGN CODE -</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.8642	STRAINERS	QUANTITY - 3 (2-3 INCH, 1-2 INCH) TYPE - FLOW RATE - DESIGN PRESS - DESIGN TEMP - DIFF. PRESS - RATING/SIZE SAFETY CLASS - NNS SEISMIC CAT. - NONE
226.865	PIPING	
226.866	VALVES	
226.8661	GATE	
226.8662	CHECK	
226.8665	RELIEF	
226.8667	BALL	
226.8668	PLUG	
226.867	PIPING - MISC ITEMS	
226.8673	SPECIALTIES	
226.86731	SPRAY RINGS	QUANTITY - 2 RING DIAMETER - 12.17 FT EACH MATERIAL - 2 IN. SS PIPE, SCH.40S SPECIAL REQUIREMENTS: SPRAY RING NO. 1 - 40 NOZZLES ORIENTED IN A HORIZONTAL PLANE, EACH WITH A CAPACITY OF 0.4 GPM @ 40 PSIG AND A SPRAY ANGLE OF 65 DEGREES SPRAY RING NO. 2 - 70 NOZZLES ORIENTED IN A HORIZONTAL PLANE, EACH WITH A CAPACITY OF 1.0 GPM @ 40 PSIG AND A SPRAY ANGLE OF 65 DEGREES SAFETY CLASS - NNS SEISMIC CAT. - NONE

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.86732	STEAM CLEANER	<p>QUANTITY - 1</p> <p>STEAM FLOW - 350 LB/HR</p> <p>STEAM PRESS -</p> <p>STEAM TEMP -</p> <p>SPECIAL REQUIREMENTS - 6 FT LENGTH OF HOSE (INTAKE), STRAINER, AND STEAM GUN WITH NOZZLE</p>
226.868	INSTRUMENTATION+CONTROL	
226.8681	ULTRASONIC GENERATOR	<p>QUANTITY - 1</p> <p>TYPE - AIR COOLED</p> <p>POWER RATING - 6 KW (AVG)</p>
226.8682	ULTRASONIC TRANSDUCERS	<p>QUANTITY - 6 (TWO SETS OF 3 EACH)</p> <p>TYPE - IMMERSIBLE</p>
226.869	FOUNDATIONS/SKIDS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT
NUMBER

226.8691 ULTRASONIC PACKAGES

DESCRIPTION

QUANTITY - 2
ULTRASONIC PACKAGE NO. 1 CONSISTS OF:
ULTRASONIC TANK:
DIMENSIONS - 4.33 FT X 4 FT X 3 FT HIGH
DESIGN PRESS - ATMOS
DESIGN TEMP - 210 F
MATERIAL - 304L S.S.
PUMP:
TYPE - CENTRIFUGAL
FLOW RATE - 20 GPM
FILTER:
TYPE - DISPOSABLE CARTRIDGE
FLOW RATE - 20 GPM
RATING - 10 MICRON
ULTRASONIC PACKAGE NO. 2 CONSISTS OF:
ULTRASONIC TANK:
DIMENSIONS - 20 FT X 2 FT X 3 FT HIGH
DESIGN PRESS - ATMOS
DESIGN TEMP - 210 F
MATERIAL - 304L S.S.
RINSE TANK:
DIMENSIONS - 4.33 FT X 4 FT X 3 FT HIGH
DESIGN PRESS - ATMOS
DESIGN TEMP - 210 F
MATERIAL - 304L S.S. LINED
FINAL RINSE TANK:
DIMENSIONS - 4.33 FT X 4 FT X 3 FT HIGH
DESIGN PRESS - ATMOS
DESIGN TEMP - 210 F
MATERIAL - 304L S.S. LINED
PUMP:
TYPE - CENTRIFUGAL
FLOW RATE - 20 GPM
FILTER:
TYPE - DISPOSABLE CARTRIDGE
FLOW RATE - 20 GPM
RATING - 10 MICRON

226.8692 MISCELLANEOUS ITEMS

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.86921	PRECLEANING BOOTH	DIMENSIONS - 8 FT X 10 FT X 10 FT HIGH SPECIAL REQUIREMENTS - PROVIDED WITH A 6 FT WIDE X 10 FT HIGH DOOR, GLOVE PORT, WATER CURTAIN, AND A PNEUMATIC 4 FT DIA. TURNABLE OF 2000 LB LOAD BEARING CAPACITY
226.86922	WORK BENCH	DIMENSIONS - 10 FT X 3 FT X 2.5 FT HIGH LOAD - 300 LBS/SQ FT
226.86923	WATER CURTAIN	CONSISTS OF 300 NOZZLES, EACH WITH A CAPACITY OF 0.01 GPM @ 40 PSIG AND A SPRAY ANGLE OF 65 DEGREES
226.87	LAUNDRY EQUIPMENT	
226.871	WASHER EXTRACTORS	QUANTITY - 1 CAPACITY - 200 LB
		QUANTITY - 1 CAPACITY - 100 LB
226.872	WASHERS	QUANTITY - 1 CAPACITY - 18 LB
226.873	DRYERS	QUANTITY - 3 X 100 PCT TYPE - STEAM OR ELECTRIC CAPACITY - 100 LB
226.874	LIFTING DEVICES	QUANTITY - 1 CAPACITY - 30 BUSHELS (200 LB)
		QUANTITY - 1 CAPACITY - 16 BUSHELS (100 LB)
226.875	MISCELLANEOUS	
226.8751	LABELS	QUANTITY - 2 EA SIZE - 30"W X 96"L X 36"H.

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.8752	SHELVES	QUANTITY - 15 EA CAPACITY - 21 BINS SIZE PER BIN - 12"H X 12"W X 18"D QUANTITY - 10 EA CAPACITY - 28 BINS SIZE PER BIN - 12"H X 9"W X 18"D QUANTITY - 12 EA CAPACITY - 56 BINS SIZE PER BIN - 6"H X 9"W X 18"D
226.8753	CABINETS	QUANTITY - 7 EA SIZE - 72"H X 36"W X 18"D
226.8754	HAMPERS	QUANTITY - 6 EA CAPACITY - 30 BUSHELS (200 LB) QUANTITY - 7 EA CAPACITY - 16 BUSHELS (100 LB)
226.8755	CARTS	QUANTITY - 6 EA CAPACITY - 16 BUSHELS (100 LB)
226.8756	WASTE CARS	QUANTITY - 2 EA CAPACITY - 12 GAL
226.876	DOUBLE SINK	QUANTITY - 2 EA
226.877	PIPING - MISC ITEMS	ALLOWANCE
226.88	HOT CHANGE AREA	
226.881	SHOWERS, PERSONNEL	QUANTITY - 2 EA TYPE - PERSONNEL DECONTAMINATN
226.882	FRISKERS, PERSONNEL	QUANTITY - 5 EA TYPE - RADIATION MONITORS, GM TUBE TYPE
226.883	SINKS	QUANTITY - 3 EA TYPE - PERSONNEL DECONTAMINATN
226.9	SAMPLING EQUIP	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.92	HEAT TRANS EQUIP	
226.921	SAMPLE HEAT EXCHANG RS	INCLUDED IN ACCOUNT 226.98 FLOW RATE - MATERIAL - 316 SS SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE - ASME VIII
226.93	TANKS + PRESS VESSELS	
226.931	SAMPLE VESSEL	INCLUDED IN ACCOUNT 226.98
226.932	SAMPLE SINK + HOOD	INCLUDED IN ACCOUNT 226.98
226.95	PIPING	
226.951	2IN + SMALLER	
226.9511	SS/NNS	
226.96	SAMPLE SYSTEM VALVES	
226.961	GATE	
226.962	CHECK	
226.963	GLOBE	
226.964	SAUNDERS WEIR	
226.965	RELIEF	
226.97	PIPING-MISC ITEMS	
226.971	HANGERS & SUPPORTS	
226.972	INSULATION	
226.973	SPECIALTIES	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
226.98	INSTRUMENTATION+CONTROL	<p>SAMPLING PANEL INCLUDING CONTROL SWITCHES, INDICATOR LIGHTS, SAMPLE CONDITIONERS, TEMP CONTROLLERS, SOLENOID-OPERATED VALVES AND SAMPLE HOODS</p> <p>COPPER ANALYZER - 1 IRON ANALYZER - 1 OXYGEN ANALYZER - 2 CONDUCTIVITY CHANNELS - 10 RECORDERS - 6</p>
227.	RX INSTRUMENTATION+CONTROL	
227.1	BENCHBOARD, PANELS + RACKS	<p>PROCESS INSTRUMENTATION AND CONTROLS ARE LISTED WITH THEIR RESPECTIVE SYSTEMS</p>
227.11	NSS CONTROL BOARD	<p>INCLUDES: SAFETY INJECTION REACTOR COOLANT AND CONTROL CHEMICAL AND VOLUME CONTROL NUCLEAR INSTRUMENTATION REACTOR AUXILIARY SYSTEMS TOTAL OF 41 FEET OF DUPLEX BOARD</p>
227.14	REMOTE SHUTDOWN PANELS	<p>6 FEET OF FREE STANDING VERTICAL PANELS</p>
227.15	HVAC PANELS	<p>INCLUDES: CONTAINMENT STRUCTURE HVAC AUXILIARY BUILDING HVAC DIESEL GENERATOR BUILDING HVAC CONTROL BUILDING HVAC OTHER NNS RELATED HVAC</p>
227.16	RADWASTE PANELS + RACKS	<p>INCLUDES: RADWASTE CONTROL PANELS DRUM CAPPING STATIONS WASTE CONCENTRATOR PANEL CLEAN UP PHASE TANK PANEL BACKWASH RECEIVING TANK PANEL OTHER LOCAL PANELS AND RACKS</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
227.17	LOCAL PANELS + CABINETS	<p>INCLUDES:</p> <p>LEAK DETECTION</p> <p>SEISMIC MONITORING</p> <p>METEOROLOGICAL MONITORING</p> <p>CONTAINMENT LEAKAGE</p> <p>CONTAINMENT ATMOSPHERE MONITOR</p> <p>COMBUSTIBLE GAS CONTROL</p> <p>RADWASTE EQUIPMENT STATUS</p> <p>BALANCE OF NSS INSTRUMENT CABINETS</p> <p>LOGIC OR RELAY CABINETS</p>
227.18	INSTRUMENT RACKS	LOCAL RACKS - 22
227.2	PROCESS COMPUTER	<p>PLANT SUPERVISORY AND EQUIPMENT</p> <p>PERFORMANCE MONITORING COMPUTER:</p> <p>REDUNDANT CENTRAL PROCESSOR UNITS</p> <p>128K X 2 CORE MEMORY</p> <p>16 BITS</p> <p>2 MILLION WORDS BULK MEMORY</p> <p>6 X 19 INCH COLOR CRT</p> <p>2 TYPERS</p> <p>2 PRINTER/PLOTTERS</p> <p>1 MAGNETIC TAPE DRIVE</p> <p>1 CARD READER</p> <p>1 CARD PUNCH</p> <p>1 PAPER TAPE READER/PUNCH</p> <p>1 FOUR PEN ANALOG RECORDER</p> <p>2048 ANALOG INPUTS</p> <p>1904 DIGITAL INPUTS</p> <p>128 SEQUENCE OF EVENTS INPUTS</p> <p>16 PULSE INPUTS</p> <p>REMOTE MULTIPLEXING FOR COMPUTER</p> <p>INPUTS</p>
227.3	MONITORING SYSTEMS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
227.31	RADIOLOGICAL MON+DATA MNG	<p>INCLUDES MONITORS FOR POST ACCIDENT MONITORING, LEAK DETECTION, AND FAILED FUEL DETECTION:</p> <p>AIRBORNE RADIOACTIVITY MONITORS - 18 PROCESS RADIOACTIVITY MONITORS - 15 EFFLUENT LIQUID DISCHARGE MONTRS - 5 EFFLUENT GAS DISCHARGE MONITORS - 5 AREA RADIATION MONITORS - 21 RATEMETERS, RECORDERS, ALARMS WITH CABINETS - 1 LOT SOFTWARE PACKAGE FOR DOSE AND ACTIVITY EVALUATION</p>
227.32	NEUTRON MONITORING SYSTEM	<p>INCLUDES:</p> <p>FIXED IN-CORE MONITORS EX-CORE MONITORS MOVABLE IN-CORE MONITOR</p>
227.33	POST ACCIDENT MONITOR	<p>CENTRAL MONITOR SYSTEM FOR SAFETY SYSTEM STATUS AND FOR ANTICIPATED TRANSIENTS WITHOUT SCRAM</p>
227.34	REACTOR DIAGNOSTIC SYSTEM	<p>INCLUDES:</p> <p>LOOSE PART MONITOR VIBRATION MONITORS DISPLACEMENT PROBES NEUTRON NOISE THRESHOLD MONITORS DATA HANDLING AND ANALYSIS</p>
227.35	CONTAINMENT ATMOSPHERE MON	<p>INCLUDES:</p> <p>HYDROGEN MONITOR - 4 GROSS GAMA MONITOR - 4 IODINE MONITOR - 1 NOBLE GAS MCNITOR - 1 PARTICULATE MONITOR - 1</p>
227.36	CONTAINMENT LEAK MONITOR	<p>INCLUDES:</p> <p>TRANSMITTERS - 6 TEMPERATURE ELEMENTS - 8 HUMIDITY MONITORS - 2 EVACUATION PUMPS - 1 SOFTWARE PACKAGE</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MW PWR - 2.5 IN HC AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
227.37	FAILED FUEL DETECTION	INCLUDES: GROSS GAMMA MONITOR - 1 SPECIFIC FISSION PROD MON - 1
227.4	PLANT CONTROL SYSTEMS	
227.41	REACTOR POWER CONTROL	INCLUDES: REACTOR CONTROL SYSTEMS ROD POSITION INDICATION SYSTEM
227.42	REACTOR PROTECTION SYSTEM	INCLUDES: RPS LOGICS TESTING FACILITIES REQUIRED CABINETS
227.43	ENGR SAFETY FEATURE ACTUAT	INCLUDES: ESF LOGICS AND CABINETS ESF TEST EQUIPMENT LOAD SEQUENCER FINAL ELEMENT INTERFACE
227.5	RX PLANT I+C TUBING+FITTING	LINEAR FEET OF TUBING - 27,600 INSTRUMENT STRONGBACKS - 20
228.	REACTOR PLANT MISC ITEMS	
228.1	MISC SUSPENSE ITEMS	
228.11	FINAL ALIGNMENT+CHECKING	ALLOWANCE FOR MISCELLANEOUS CHECKING AND ADJUSTING OF EQUIPMENT AFTER INITIAL ROTATION TESTS. (THIS ITEM SHALL BE USED AS A SUSPENSE ACCOUNT. THE COST OF WORK SHOULD BE CHARGED TO THE EQUIPMENT SERVICED WITH THIS ALLOWANCE BEING REDUCED BY THE SAME AMOUNT.)
228.12	FIELD PAINTING	ALLOWANCE FOR PAINTING OF ALL REACTOR PLANT EQUIPMENT AND PIPING
228.13	QUALIFICATION OF WELDERS	ALLOWANCE FOR QUALIFYING WELDERS AND WELDING PROCEDURES
228.2	STANDARD MSSS VALVE PKG	ALLOWANCE

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
228.3	REACTOR PLANT INSULATION	
228.31	PIPE INSULATION	TOTAL COST OF REACTOR PLANT PIPE INSULATION .
228.32	EQUIPMENT INSULATION	TOTAL COST OF REACTOR PLANT EQUIPMENT INSULATION
228.33	NSSS INSULATION	ALLOWANCE
23 .	TURBINE PLANT EQUIPMENT	
231.	TURBINE GENERATOR	
231.1	TURBINE GENERATOR +ACCESSRY	
231.11	TURBINE FACTORY COST	<p>QUANTITY 1</p> <p>TYPE FC6F-43IN LSB</p> <p>RATING 1,192.4MWE AT 2.5 IN HG ABS</p> <p>SPEED 1,800 RPM</p> <p>TURBINE DESIGN</p> <p>STEAM FLOW 13,717,722 LB/HR</p> <p>THROTTLE PRESS 975 PSJA</p> <p>THROTTLE TEMP 544 F</p> <p>MOISTURE 0.25 %</p> <p>REHEAT SINGLE STAGE</p> <p>SHAFT SEAL SYS 125 F DESIGN</p> <p>OIL COOLER 105 F WATER DES</p> <p>GENERATOR DESIGN</p> <p>RATING 1350MVA, 25,000V, 3PH, 60HZ</p> <p>POWER FACTOR 0.90</p> <p>SHORT CIR RAT 0.58</p> <p>ROTOR COOLING 75 PSIG HYDROGEN</p> <p>STATOR COOLING 105 F WATER DESIGN</p> <p>ACCESSORIES:</p> <p>ADDITIONAL MOTOR DRIVEN BLOWER FOR STEAM PACKING EXHAUSTER.</p> <p>STEAM SEAL PIPING BETWEEN MAIN TURBINE AND BOILER FEED PUMP TURBINES.</p> <p>FIRE-RESISTANT FHC SYSTEM FLUID.</p> <p>105F WATER TEMP FOR OIL AND STATOR COOLERS.</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
231.12	OTHER TURBINE COSTS	
231.13	EXCITER & VOLTAGE REGULTR.	TYPE ALTERREX RATING 2970 KW, 520 V RESPONSE RATIO 0.50
231.14	MOISTURE SEPARATOR/REHEATR	QUANTITY 4 X 25 PERCENT TYPE/MS EFF. SHELL AND TUBE/100PCT ORIENTATION HORIZONTAL HEAT LOAD 8.47 E+08 BTU/HR SURFACE AREA SHELL CONDITION DES.PRES/TEMP 270 PSIG / 650 F TEMP. IN/OUT FLOW RATE 10,270,859 LB/HR MATERIAL TUBE CONDITION QUANTITY SIZE DES.PRES/TEMP 1,185 PSIG / 572 F TEMP. IN/OUT FLOW RATE 1,422,547 LB/HR MATERIAL SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME SECT VIII, DIV.1
231.2	FOUNDATIONS	
231.21	T-G PEDESTAL	
231.211	EXCAVATION WORK	INCLUDED WITH STRUCTURE ASSOCIATED YARDWORK
231.213	SUBSTRUCTURE CONCRETE	
231.2131	FORMWORK	
231.2132	REINFORCING STEEL	
231.2133	CONCRETE	
231.2134	EMBEDDED STEEL	
231.2135	WATERS TOPS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
231.2138	RUBBING CONCRETE SURFACE	
231.2139	EXPANSION JOINT	
231.214	SUPERSTRUCTURE	
231.2141	CONCRETE WORK	
231.21411	FORMWORK	
231.21412	REINFORCING STEEL	
231.21413	CONCRETE	
231.21414	EMBEDDED STEEL	
231.21417	RUBBING CONCRETE SURFACES	
231.21418	EXPANSION JOINT	
231.2142	STRUCTURAL + MISC STEEL	
231.21421	STRUCTURAL STEEL	
231.21425	GRATING	
231.22	REHEATR&MOISTR SEPRTR SUPT	
231.221	STRUCTURAL STEEL	
231.4	LUBRICATING OIL SYSTEM	
231.43	TANKS + PRESSURE VESSELS	
231.431	LUBE OIL STORAGE TANK	
	QUANTITY	1
	ORIENTATION	HORIZONTAL
	DIMENSIONS	
	VOLUME	18,000 GAL
	DESIGN PRES.	15 PSIG
	DESIGN TEMP.	100 F
	MATERIAL	A-283, GR C, CARBO-ZINC LINING
	SAFETY CLASS	NNS
	SEISMIC CAT.	NONE
	DESIGN CODE	API

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
231.45	PIPING	
231.451	2IN. + SM/ LER	
231.4511	CS/NNS	
231.452	2.5IN + L+ GFR	
231.4521	CS/NNS	
231.46	VALVES	
231.461	GATE	
231.47	PIPING-MISC. ITEMS	
231.471	HANGERS + SUPPORTS	ALLOWANCE
231.472	INSULATION	
231.473	SPECIALTIES	
231.48	INSTRUMENTATION + CONTROL	LOCAL INDICATORS - 35 TEMPERATURE ELEMENTS - 2 PROCESS SWITCHES - 20 ANNUNCIATORS - 12
231.49	SKIDS / FOUNDATIONS	
231.491	LUBE OIL CONDING EQPT SKID	LUBE OIL PURIFIER QUANTITY 1 TYPE CENTRIFUGE CAPACITY MAIN TURBINE 1,570 GPH BFP TURBINE 450 GPH TRANSFER PUMPS AND MOTORS QUANTITY 2 X 100 PERCENT FLOW RATE 100 GPM TDH 50 FEET
231.492	FIRE PROTECTION EQPT.	TYPE AUTOMATIC DELUGE WATER SPRAY FLOW 1000 GPM
231.5	GAS SYSTEMS	

EQUIPMENT LIST - REPORT 1

05/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
231.51	HYDROGEN STORAGE SYSTEM	
231.13	TANKS + PRESSURE VESSELS	
231.5131	HYDROGEN STORAGE BOTTLES	PERMANENT STORAGE TANK CAPACITY FOR 76,000 SCF
231.515	PIPING	
231.5151	2 IN + SMALLER	
231.5152	2.5 IN + LARGER	
231.51521	CS/NNS	
231.516	VALVES	
231.5163	GLOBE	
231.517	PIPING-MISC ITEMS	
231.5171	HANGERS + SUPPORTS	
231.5172	INSULATION	
231.5173	SPECIALTIES	
231.52	CARBON DIOXIDE STORAGE SYS	
231.523	TANKS + PRESSURE VESSELS	
231.5231	CARBON DIOXIDE TANKS	PERMANENT STORAGE TANK CAPACITY FOR 26,000 SCF
231.525	PIPING	
231.5251	2 IN + SMALLER	
231.5252	2.5 IN + LARGER	
231.52521	CS/NNS	
231.526	VALVES	
231.5263	GLOBES	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
231.527	PIPING-MISC ITEMS	
231.5271	HANGER + SUPPORT	
231.5272	INSULATION	
231.5273	SPECIALTIE.	
231.6	MSTR SEPRTR/REHTR DRAINSYS	
231.63	TANKS + PRESS. VESSELS	
231.631	M/S DRAIN TANK	QUANTITY 4 X 25 PERCENT ORIENTATION HORIZONTAL DIMENSIONS 4FT DIA X 6.5FT ST.SIDE VOLUME 600 GAL DESIGN PRESS 270 PSIG DESIGN TEMP 650 F MATERIAL A516 GR 70 SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME SECT VIII
231.632	REHEATER DRAIN TANK	QUANTITY 4 X 25 PCT ORIENTATION HORIZONTAL DIMENSIONS 5FT DIA X 7.0FT ST.SIDE VOLUME 1,000 GAL DESIGN PRES. 1,200 PSIG DESIGN TEMP. 600 F MATERIAL A516 GR 70 SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME SECT VIII
231.65	PIPING	
231.651	2IN. + SMALLER	
231.6511	CS/NNS	
231.652	2.5IN. + LARGER	
231.6521	CS/NNS	
231.66	VALVES	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
231.661	GATE	
231.662	CHECK	
231.663	GLOBE	
231.668	PLUG	
231.67	PIPING-MISC. ITEMS	
231.671	PIPE HANGERS + SUPPORTS	
231.672	INSULATION	
231.673	SPECIALTIES	
231.68	INSTRUMENTATION + CONTROL	TRANSMITTER 12 LOCAL INDICATOR 12 PROCESS SWITCH 32 CONTROLLER 12 ANNUNCIATOR 12
233.	CONDENSING SYSTEMS	
233.1	CONDENSER EQUIPMENT	
233.12	HEAT TRANSFER EQUIPMENT	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA - COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

233.121 CONDENSERS

QUANTITY 3 X 33-1/3 PCT. SHELLS
TYPE 2-PASS, DIVIDED WATERBOX
ORIENTATION HORIZONTAL
SURFACE AREA 299,000 SQ FT
DES. EXHAUST 3.75 IN HG ABS
HEAT LOAD 2.55 E09 BTU/HR
TEMP RISE 26 F
SHELL CONDITION
DES. PRESS/TEMP 80 PSIG/150 F
FLOW RATE 2.62 E+06 LB/HR
MATERIAL CARBON STEEL
TUBE CONDITION
QUANTITY 19,910
SIZE 1-1/8 IN DIA., 20 BWG
LENGTH 51 FT
DES. PRESS/TEMP 80 PSIG/150 F
FLOW RATE 196,000 GPM
INLET WATER: DES. 92 F
MAX. 93 F
VELOCITY 7.25 FPS
MATERIAL 90-10 CU-NI
SAFETY CLASS NNS
SEISMIC CAT. NONE
DESIGN CODE ASME SECTION VIII, DIV 1

233.122 TUBE CLEANING

NONE

233.2 CONDENSATE SYSTEM

233.21 ROTATING MACHINERY

233.211 CONDENSATE PUMP + MOTOR

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148.- 1139 M&E/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
233.2111	COND PUMP	<p>QUANTITY 3 X 50 PCT. WITH 5 PCT. FLOW MARGIN</p> <p>TYPE CENTRIFUGAL - SIX STAGE</p> <p>ORIENTATION VERTICAL</p> <p>FLOW RATE 13,500 GPM</p> <p>SPEED 1,187 RPM</p> <p>TDH 330 FT AT DES. CAP'Y</p> <p>BHP 1,060 HP</p> <p>NPSH 16 FT.</p> <p>EFFICIENCY 83 PCT.</p> <p>DESIGN PRES 200 PSIG</p> <p>DESIGN TEMP 93-105 F</p> <p>MATERIAL CASING: C1, IMP: 1ST STG CAGNM, SHAFT: 410SS</p> <p>SAFETY CLASS NNS</p> <p>SEISMIC CAT. NONE</p> <p>DESIGN CODE</p>
233.2112	COND PUMP MOTOR	<p>TYPE T.E.F.C.</p> <p>HORSEPOWER 1,250 HP</p> <p>SPEED 1,200 RPM</p> <p>VOLTAGE 4 KV, 3 PH, 60 HZ</p> <p>COOLING FLOW 77 GPM</p>
233.212	BOOSTER PUMP + MOTOR	
233.2121	BOOSTER PUMP	<p>QUANTITY 1 X 50 PCT. WITH 5 PCT. FLOW MARGIN</p> <p>TYPE CENTRIFUGAL - TWO STAGE</p> <p>ORIENTATION HORIZONTAL</p> <p>FLOW RATE 10,500 GPM</p> <p>SPEED 3,600 RPM</p> <p>TDH 775 FT AT DES. CAP'Y</p> <p>BHP 2,375 HP</p> <p>NPSH 50 FT</p> <p>EFFICIENCY 86 PCT.</p> <p>DESIGN PRES 650 PSIG</p> <p>DESIGN TEMP 120 F</p> <p>MATERIAL CASING, IMPELLERS AND SHAFT -- CHROME STEEL</p> <p>SAFETY CLASS NNS</p> <p>SEISMIC CAT. NONE</p> <p>DESIGN CODE</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
233.2122	BOOSTER PUMP MOTOR	TYPE T.E.W.C. HORSEPOWER 2,500 HP SPEED 3,600 RPM VOLTAGE 13.2 KV, 3 PH, 60 HZ COOLING FLOW 75 GPM
233.213	TRANSFER PUMP + MOTOR	
233.2131	TRANS PUMP	QUANTITY 2 X 100 PCT. TYPE CENTRIFUGAL ORIENTATION HORIZONTAL FLOW RATE 600 GPM SPEED 3,600 RPM TDH 40 FT BHP 7.6 HP NPSH 15 FT EFFICIENCY 80 PCT. DESIGN PRES 50 PSI DESIGN TEMP 100F MATERIAL CASING, IMPELLER AND SHAFT -- CHROME STEEL SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
233.2132	TRANS PUMP MOTOR	TYPE T.E.F.C. HORSEPOWER 10 HP SPEED 3,600 RPM VOLTAGE 460 V, 3 PH, 60 HZ
233.23	TANKS & PRESSURE VESSELS	
233.231	CONDENSATE STORAGE TANK	QUANTITY 1 ORIENTATION VERTICAL DIMENSIONS 42FT DIA X 42FT ST.SIDE VOLUME 400,000 GAL DESIGN PRES. ATMOS. DESIGN TEMP. 100 F MATERIAL SS SAFETY CLASS 3 SEISMIC CAT. I DESIGN CODE ASME SECTION III
233.25	PIPING	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
233.251	2 IN. + SMALLER	
233.2511	CS/NNS	
233.252	2.5 IN. + LARGER	
233.2521	CS/NNS	
233.26	VALVES	
233.261	GATE VALVES	
233.262	CHECK VALVES	
233.263	GLOBE VALVES	
233.266	BUTTERFLY	
233.267	BALL VALVES	
233.27	PIPING-MISC. ITEMS	
233.271	HANGERS + SUPPORTS	
233.272	INSULATION	
233.273	SPECIALTIES	
233.28	INSTRUMENTATION + CONTROL	TRANSMITTER 21 LOCAL INDICATOR 38 BOARD MOUNTED INDICATOR 28 RECORDER 2 FLOW ELEMENT 1 CONDUCTIVE ELEMENT 4 TEMP ELEMENT 3 TEMP TRANSMITTER 31 PROCESS SWITCH 17 CONTROLLER 7 ANNUNCIATOR 12 MISC. DEV 10
233.29	FOUNDATIONS	
233.291	CONDENSATE TANK FDTN	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
233.2911	FORMWORK	
233.2912	REINFORCING STEEL	
233.2913	CONCRETE	
233.2914	EMBEDDED IRON	
233.2915	STRUCTURAL STEEL	
233.2916	MISC. STEEL	
233.292	CONDENSATE PUMP FDTN	INCLUDED WITH TURBINE ROOM AND HEATER BAY SUBSTRUCTURE CONCRETE
233.2921	FORMWORK	
233.2922	REINF. STEEL	
233.2923	CONCRETE	
233.2924	EMBEDDED IRON	
233.2925	STRUCTURAL STEEL	
233.2926	MISC. STEEL	
233.293	BOOSTER PUMP FDTN	INCLUDED WITH TURBINE ROOM AND HEATER BAY SUBSTRUCTURE CONCRETE
233.2931	FORMWORK	
233.2932	REINF. STEEL	
233.2933	CONCRETE	
233.2934	EMBEDDED IRON	
233.2935	STRUCTURAL STEEL	
233.2936	MISC. STEEL	
233.3	GAS REMOVAL SYSTEM	
233.31	CONDENSER GAS REMOVAL SYS.	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
233.311	ROTATING MACHINERY	
233.3111	MECH VACUUM PUMP & MOTOR	
233.31111	MECH VAC PUMP	QUANTITY 3 X 50 PCT. TYPE ROTARY ORIENTATION HORIZONTAL FLOW RATE 48 SCFM AT 1.5 IN SPEED 435 RPM BHP EFFICIENCY DESIGN PRES 150 PSIG DESIGN TEMP 150 F MATERIAL C.I. SHAFT - C.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
233.31112	MECH VAC PUMP MOTOR	TYPE T.E.F.C. HORSEPOWER 150 HP SPEED 1,800 RPM VOLTAGE 460V, 3 PH, 60 HZ
233.315	PIPING	
233.3151	2 IN. + SMALLER	
233.31511	CS/NNS	
233.3152	2.5 IN. + LARGER	
233.31521	CS/NNS	
233.316	VALVES	
233.3161	GATE	
233.3162	CHECK	
233.3163	GLOBE	
233.3165	VACUUM RELIEF	
233.3166	BUTTERFLY	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
233.3168	PLUG	
233.317	PIPING-MISC. ITEMS	
233.3171	HANGERS + SUPPORTS	
233.3172	INSULATION	
233.3173	SPECIALTIES	
233.318	INSTRUMENTATION + CONTROL	LOCAL INDICATOR 30 BOARD MOUNTED INDICATOR 4 TEMP ELEMENT 8 PROCESS SWITCH 6 MISC. DEVICE 4
233.319	FOUNDATIONS/SKIDS	
233.3191	VACUUM PUMP FDTN.	INCLUDED WITH TURBINE ROOM AND HEATER BAY SUBSTRUCTURE CONCRETE
233.31911	FORMWORK	
233.31912	REINFORCING STEEL	
233.31913	CONCRETE	
233.31914	EMBEDDED STEEL	
233.4	TURBINE BYPASS SYSTEM	
233.41	TURBINE BYPASS SYS. EQPT.	TWO 16 IN. DIA. M.S. HEADERS, EACH WITH SIX 8 IN. DIA. BRANCHES TO CONDENSERS . EACH BRANCH CONTAINS 6 IN. DIA. DUMP VALVES
233.415	PIPING	(INCLUDED IN ACCOUNT NO. 235.1)
233.4151	2IN + SMALLER	
233.4152	2.5IN + LARGER	
233.416	VALVES	
233.4163	GLOBE (DUMP)	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
233.417	PIPING - MISC. ITEMS	
233.4171	HANGERS + SUPPORTS	(INCLUDED IN ACCOUNT 235.1)
233.4172	INSULATION	(INCLUDED IN ACCOUNT 235.1)
233.4173	SPECIALTIES	(INCLUDED IN ACCOUNT 235.1)
233.418	INSTRUMENTATION + CONTROL	(INCLUDED IN ACCOUNT 235.118)
233.5	CONDENSATE POLISHING	
233.51	ROTATING MACHINERY	
233.511	ACID REGEN PUMP + MOTOR	
233.5111	ACID REGEN PUMP	QUANTITY 2 X 100 PCT. TYPE POSITIVE DISPLACEMENT ORIENTATION HORIZONTAL FLOW RATE 0 - 300 GPM SPEED - TDH 100 FT BHP - NPSH 10 FT EFFICIENCY - DESIGN PRES 150 PSIG DESIGN TEMP 150 F MATERIAL CARPENTER 20 SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
233.5112	ACID REGEN PUMP MOTOR	TYPE HORSEPOWER 3/4 HP SPEED - VOLTAGE 460V, 3 PH, 60 HZ
233.512	CAUSTIC REGEN PUMP + MOTOR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
233.5121	CAUSTIC REGEN PUMP	QUANTITY 2 X 100 PCT. TYPE POSITIVE DISPLACEMENT ORIENTATION HORIZONTAL FLOW RATE 0-150 GPM SPEED - TDH 100 FT BHP - NPSH 10 FT EFFICIENCY - DESIGN PRES 150 PSIG DESIGN TEMP 150 F MATERIAL S.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
233.5122	CAUSTIC REGEN PUMP MOTOR	TYPE HORSEPOWER 3/4 HP SPEED VOLTAGE 460V, 3 PH, 60 HZ
233.513	AMMONIA REGEN PUMP + MOTOR	
233.5131	AMMONIA REGEN PUMP	QUANTITY 2 X 100 PCT. TYPE CENTRIFUGAL ORIENTATION HORIZONTAL FLOW RATE 5 GPM SPEED 1,800 RPM TDH 100 FT BHP NPSH 10 FT EFFICIENCY - DESIGN PRES 150 PSIG DESIGN TEMP 150 F MATERIAL S.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
233.5132	AMMONIA REGEN PUMP MOTOR	TYPE HORSEPOWER 1 HP SPEED 1800 RPM VOLTAGE 460V, 3 PH, 60 HZ
233.514	SLUICE WATER REGEN P+M	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
233.5141	SLUICE WATER REGEN PUMP	QUANTITY 2 X 100 PCT. TYPE CENTRIFUGAL ORIENTATION HORIZONTAL FLOW RATE 300 GPM SPEED 1,800 RPM TDH 100 FT BHP NPSH 10 FT EFFICIENCY DESIGN PRES 150 PSIG DESIGN TEMP 150 F MATERIAL S.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
233.5142	SLUICE WATER REGEN P MOTOR	TYPE HORSEPOWER 15 HP SPEED 1800 RPM VOLTAGE 460V, 3 PH, 60 HZ
233.515	RECYCLE PUMP + MOTOR	
233.5151	RECYCLE PUMP	QUANTITY 2 X 100 PCT. TYPE CENTRIFUGAL ORIENTATION HORIZONTAL FLOW RATE 1,000 GPM SPEED 1,800 RPM TDH 50 FT BHP NPSH 10 FT EFFICIENCY DESIGN PRES 150 PSIG DESIGN TEMP 150 F MATERIAL S.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
233.5152	RECYCLE PUMP MOTOR	TYPE HORSEPOWER 15 HP SPEED 1800 RPM VOLTAGE 460V, 3 PH, 60 HZ
233.516	AIR BLOWER + MOTOR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
233.5161	AIR BLOWER	QUANTITY 1 TYPE POSITIVE DISPLACEMENT
233.5162	AIR BLOWER MOTOR	TYPE HORSEPOWER 25 HP SPEED VOLTAGE 460V, 3 PH, 60 HZ
233.53	TANKS + PRESSURE VESSELS	
233.531	RESIN SEPRTR+CATION RGN TK	QUANTITY 1 ORIENTATION VERT.W/STRUC.STEEL LEGS DIMENSION 6 FT DIA. X 14 FT STR. SIDE, SKID MOUNTED VOLUME 390 CU FT DESIGN PRES. 75 PSIG DESIGN TEMP. 130 F MATERIAL C.S., RUBBER LINED, W/S.S. INTERNALS SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME SECTION VIII
233.532	ANION REGEN TANK	QUANTITY 1 ORIENTATION VERT.W/STRUC.STEEL LEGS DIMENSIONS 5 FT DIA. X 14 FT STR. SIDE, SKID MOUNTED VOLUME 270 CU FT DESIGN PRES. 75 PSIG DESIGN TEMP. 130 F MATERIAL C.S. RUBBER LINED, W/S.S. INTERNALS SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME SECTION VIII

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
233.533	RESIN STORAGE TANK	QUANTITY 1 ORIENTATION VERT.W/STRUC.STEEL LEGS DIMENSION 5.5 FT DIA. X 14 FT STR SIDE, SKID MOUNTED VOLUME 330 CU FT DESIGN PRES. 75 PSIG DESIGN TEMP. 130 F MATERIAL C.S. RUBBER LINED W/S.S. INTERNALS SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME SECTION VIII
233.534	HOT WATER HEATING TANK	QUANTITY 1 ORIENTATION VERTICAL DIMENSIONS 7 FT DIA X 8 FT ST SIDE VOLUME 300 CU FT DESIGN PRES. 75 PSIG DESIGN TEMP. 300 F MATERIAL C.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME SECTION VIII
233.535	BULK ACID STORAGE TANK	QUANTITY 1 ORIENTATION HORIZONTAL DIMENSIONS 8FT DIA X 14FT ST. SIDE VOLUME 700 CU FT DESIGN PRES. 15 PSIG DESIGN TEMP. 150 F MATERIAL C.S. - LINED SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE API
233.536	BULK CAUSTIC STORAGE TANK	QUANTITY 1 ORIENTATION HORIZONTAL DIMENSIONS 8FT DIA X 14FT ST. SIDE VOLUME 700 CU FT DESIGN PRES. 15 PSIG DESIGN TEMP. 150 F MATERIAL C.S. - LINED SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE API

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
233.537	BULK AMMONIA STORAGE TANK	QUANTITY 1 ORIENTATION HORIZONTAL DIMENSIONS 8FT DIA X 14FT ST. SIDE VOLUME 700 CU FT DESIGN PRES. 15 PSIG DESIGN TEMP. 150 F MATERIAL C.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE API
233.54	PURIFICATION EQUIPMENT	
233.541	MIXED BED DEMINERALIZERS	QUANTITY 7 (INCLUDING 1 SPARE) ORIENTATION VERT. W/DISHED HEADS AND STRUCT. STEEL LEGS RESIN TYPE CATION AND ANION SIZE 9.5FT DIA X 4.5FT STR. SIDE RESIN VOLUME CATION - 127 CU FT ANION -- 85 CU FT FLOW RATE 3500 GPM @ 49 GPM/SQ FT TOTAL FOR 6-21,000 GPM FREEBOARD 1.5 FT BED DEPTH 3.0 FT SKID MOUNTED DESIGN PRES. 200 PSIG DESIGN TEMP. 130 F MATERIAL C.S. RUBBER LINED W/S.S. INTERNALS SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME SECTION VIII
233.58	INSTRUMENTATION + CONTROL	ALLOWANCE
234.	FEED HEATING SYSTEM	
234.1	FEEDWATER HEATERS	
234.12	HEAT TRANSFER EQUIPMENT	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
234.121	NO.1 LP HEATERS	<p>QUANTITY 3 X 33-1/3 PCT. TYPE SHELL AND TUBE PASSES 4 ORIENTATION HORIZONTAL HEAT LOAD 2.42 E+08 BTU/HR APPROACH 10 F TERM. DIFF. 5 F SURFACE AREA 18,465 SQ FT EACH SHELL CONDITION DES.PRES/TEMP 50 PSIG / 600 F STEAM FLOW 202,170 LB/HR DRAIN FLOW 727,712 LB/HR MATERIAL C.S. TUBE CONDITION QUANTITY 1,700 SIZE 3/4 IN O.D., BWG 20 DES.PRES/TEMP 600 PSIG / 600 F FLOW RATE 3,496,663 LB/HR MATERIAL S.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME VIII, DIV 1</p>
234.122	NO.2 LP HEATERS	<p>QUANTITY 3 X 33-1/3 PCT. TYPE SHELL AND TUBE PASSES 2 ORIENTATION HORIZONTAL HEAT LOAD 1.24 E+08 BTU/HR APPROACH 10 F TERM. DIFF. 5 F SURFACE AREA 12,330 SQ FT EACH SHELL CONDITION DES.PRES/TEMP 50 PSIG / 600 F STEAM FLOW 115,260 LB/HR DRAIN FLOW 503,974 LB/HR MATERIAL C.S. TUBE CONDITION QUANTITY 1,180 SIZE 5/8 IN O.D., BWG 20 DES.PRES/TEMP 600 PSIG / 600 F FLOW RATE 3,496,663 LB/HR MATERIAL S.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME VIII, DIV. 1</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
234.123	NO.3 LP HEATERS	<p> QUANTITY 3 X 33-1/3 PCT. TYPE SHELL AND TUBE PASSES 2 ORIENTATION HORIZONTAL HEAT LOAD 2.38 E+08 BTU/HR APPROACH 10 F TERM. DIFF. 5 F SURFACE AREA 14,085 SQ FT EACH SHELL CONDITION DES.PRES/TEMP 100 PSIG / 600 F STEAM FLOW 226,200 LB/HR DRAIN FLOW 383,004 LB/HR MATERIAL C.S. TUBE CONDITION QUANTITY 815 SIZE 3/4 IN O.D., BWG 20 DES.PRES/TEMP 600 PSIG / 600 F FLOW RATE 3,496,663 LB/HR MATERIAL S.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME VIII, DIV. 1 </p>
234.124	NO.4 LP HEATERS	<p> QUANTITY 3 X 33-1/3 PCT. TYPE SHELL AND TUBE PASSES 2 ORIENTATION HORIZONTAL HEAT LOAD 1.23 E+08 BTU/HR APPROACH 10 F TERM. DIFF. 5 F SURFACE AREA 9,755 SQ FT EACH SHELL CONDITION DES.PRES/TEMP 150 PSIG / 600 F STEAM FLOW 156,805 LB/HR DRAIN FLOW 156,805 LB/HR MATERIAL C.S. TUBE CONDITION QUANTITY 780 SIZE 3/4 IN O.D., BWG 20 DES.PRES/TEMP 600 PSIG / 600 F FLOW RATE 3,496,663 LB/HR MATERIAL S.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME VIII, DIV 1 </p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
234.125	NO.5 HP HEATERS	<p>QUANTITY 2 X 50 PCT. TYPE SHELL AND TUBE PASSES 2 ORIENTATION HORIZONTAL HEAT LOAD 2.42 E+08 BTU/HR APPROACH TERM. DIFF. 5 F SURFACE AREA 15,330 SQ FT EACH SHELL CONDITION DES.PRES/TEMP 300 PSIG / 600 F STEAM FLOW 305,870 LB/HR DRAIN FLOW 1,577,000 LB/HR MATERIAL C.S. TUBE CONDITION QUANTITY 1,160 SIZE 3/4 IN O.D., BWG 20 DES.PRES/TEMP 600 PSIG / 600 F FLOW RATE 5,244,944 LB/HR MATERIAL S.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME VIII, DIV. 1</p>
234.126	NO.6 HP HEATERS	<p>QUANTITY 2 X 50 PCT. TYPE SHELL AND TUBE PASSES 2 ORIENTATION HORIZONTAL HEAT LOAD 6.20 E+08 BTU/HR APPROACH 10 F TERM. DIFF. 5 F SURFACE AREA 35,980 SQ FT EACH SHELL CONDITION: DES.PRES/TEMP 500 PSIG / 600 F STEAM FLOW 624,550 LB/HR DRAIN FLOW 1,271,160 LB/HR MATERIAL C.S. TUBE CONDITION: QUANTITY 2,115 SIZE 3/4 IN O.D., BWG 18 DES.PRES/TEMP 1500 PSIG / 600 F FLOW RATE 7,570,135 LB/HR MATERIAL S.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME VIII, DIV. 1</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
234.2	FEEDWATER SYSTEM	
234.21	ROTATING MACHINERY	
234.211	MAIN BOILER FEED PUMP-MBFP	<p>QUANTITY 2 X 50 PCT. WITH 7 PCT. FLOW MARGIN</p> <p>TYPE CENTRIFUGAL - ONE STAGE</p> <p>ORIENTATION HORIZONTAL</p> <p>FLOW RATE 17,200 GPM</p> <p>SPEED 5,300 RPM</p> <p>TDH 2,350 FT AT DES. CAP'Y</p> <p>BHP 10,126 HP</p> <p>NPSH 220 FT</p> <p>EFFICIENCY 89 PCT.</p> <p>DESIGN PRES. 1,500 PSIG</p> <p>DESIGN TEMP. 370 F (MAX.)</p> <p>MATERIAL CAST (CHROME STEEL)</p> <p>SAFETY CLASS NNS</p> <p>SEISMIC CAT. NONE</p> <p>DESIGN CODE</p>
234.212	MBFP TURBINE DRIVES	<p>QUANTITY 2</p> <p>TYPE MULTI-STAGE</p> <p>STEAM CONDENSING</p> <p>HORSEPOWER 10,126 HP</p> <p>SPEED 5,300 RPM</p>
234.213	EMERGENCY FEEDWATER PUMPS	<p>QUANTITY 2 X 100 PCT.</p> <p>TYPE CENTRIFUGAL, NINE STAGE</p> <p>ORIENTATION HORIZONTAL</p> <p>FLOW RATE 655 GPM</p> <p>SPEED 3,600 RPM</p> <p>TDH 3,000 FT</p> <p>BHP 684 HP</p> <p>NPSH 19 FT</p> <p>EFFICIENCY 72.5 PERCENT</p> <p>DESIGN PRES. 1,600 PSIG</p> <p>DESIGN TEMP. 200 F</p> <p>MATERIAL CASING: ASTM 216 WCB IMPELLER: ASTM 296, CAGNM (CAST CHROME)</p> <p>SAFETY CLASS 3</p> <p>SEISMIC CAT. I</p> <p>DESIGN CODE ASME SECTION III</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
234.214	EFM MOTOR	TYPE D.P. MODEL - W LLD HORSEPOWER 700 HP SPEED 3,600 RPM VOLTAGE 4 KV, 3 PH, 60 HZ
234.215	EFM TURBINE	QUANTITY 1 TYPE MULTI-STAGE, ATMOSPHERIC EXHAUST HORSEPOWER 700 HP SPEED 3,600 RPM
234.216	STARTUP FEED PUMP + MOTOR	
234.2161	STARTUP FEED PUMP	QUANTITY 1 TYPE CENTRIFUGAL, SIX STAGE, ATMOSPHERIC EXHAUST ORIENTATION HORIZONTAL FLOW RATE 1,500 GPM SPEED - TDH 2,700 FT BHP - NPSH 26 FT EFFICIENCY - DESIGN PRES. 1,500 PSIG DESIGN TEMP. 250 F MATERIAL CASING : A216 WCB IMPELLER: 5 PCT CHR 3 PCT NI SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
234.2162	STARTUP FEED PUMP MOTOR	TYPE HORSEPOWER 1,500 HP SPEED - VOLTAGE 4 KV, 3 PH, 60 HZ
234.25	PIPING	
234.251	2 IN + SMALLER	
234.2511	CS/NNS	
234.2512	CS/SC 3	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
234.252	2.5 IN + LARGER	
234.2521	CS/NNS	
234.2522	CS/SC 2	
234.2523	CS/SC 3	
234.26	VALVES	
234.261	GATE	
234.262	CHECK	
234.263	GLOBE	
234.27	PIPING-MISC. ITEMS	
234.271	HANGERS & SUPPORTS	
234.272	INSULATION	
234.273	SPECIALTIES	
234.28	INSTRUMENTATION + CONTROL	TRANSMITTER 30 LOCAL INDICATOR 25 BOARD MOUNTED INDICATOR 76 RECORDER 2 FLOW ELEMENT 12 TEMP ELEMENT 5 TEMP TRANSMITTER 13 PROCESS SWITCH 4 CONTROLLER 5 ANNUNCIATOR 2 MISC. 20
234.29	SKIDS/FOUNDATIONS	
234.291	MBFP	INCLUDED WITH TURBINE ROOM AND HEATER BAY SUBSTRUCTURE CONCRETE
234.2911	FORMWORK	
234.2912	REINFORCING STEEL	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
234.2913	CONCRETE	
234.2914	EMBEDDED STEEL	
234.3	EXTRACTION STEAM SYSTEM	
234.35	PIPING	
234.351	2 IN + SMALLER	
234.3511	CS/MNS	
234.352	2.5 IN + LARGER	
234.3521	CS/MNS	
234.36	VALVES	
234.361	GATE	
234.362	CHECK	
234.363	GLOBE	
234.37	PIPING-MISCELLANEOUS	
234.371	HANGER + SUPPORTS	
234.372	INSULATION	
234.373	SPECIALTIES	
234.38	INSTRUMENTATION + CONTROL	TRANSMITTER 19 LOCAL INDICATOR 4 BOARD MOUNTED INDICATOR 29 FLOW ELEMENT 9 PROCESS SWITCH 15 CONTROLLER 1 ANNUNCIATOR 18 MISC. 10
234.4	FWH VENT + DRAIN SYSTEM	
234.41	ROTATING MACHINERY	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
234.411	HEATER DRAIN PUMP + MOTOR	
234.4111	HEATER DRAIN PUMP	QUANTITY 2 X 50 PCT. WITH 4 PCT. FLOW MARGIN TYPE CENTRIFUGAL, SIX STAGE ORIENTATION VERTICAL FLOW RATE 5,340 GPM SPEED 1,780 RPM TDH 770 FT BHP 1,120 HP NPSH 17.4 FT EFFICIENCY 81 PCT. DESIGN PRES. 400 PSIG DESIGN TEMP. 366 F MATERIAL CASING : C.S. IMPELLER: CHR. NI SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
234.4112	HEATER DRAIN PUMP MOTOR	TYPE TEWC HORSEPOWER 1,250 HP SPEED 1,800 RPM VOLTAGE 4 KV, 3 PH, 60 HZ COOLING FLOW 4 GPM
234.43	TANKS + PRESSURE VESSELS	
234.431	HEADER DRAIN TANK	QUANTITY 1 ORIENTATION HORIZONTAL DIMENSIONS VOLUME 12,000 GAL DESIGN PRES. 300 PSIG DESIGN TEMP. 600 F MATERIAL ASTM A516 GR. 70 SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME SECTION VIII, DIV 1
234.45	PIPING	
234.451	2 IN + SMALLER	
234.4511	CS/NNS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
234.452	2.5IN + LARGER	
234.4521	CS/NNS	
234.46	VALVES	
234.461	GATE	
234.462	CHECK	
234.463	GLOBE	
234.468	PLUG	
234.47	PIPING-MISC. ITEMS	
234.471	HANGERS & SUPPORTS	
234.472	INSULATION	
234.473	SPECIALTIES	
234.48	INSTRUMENTATION + CONTROL	TRANSMITTER 24 LOCAL INDICATOR 22 BOARD MOUNTED INDICATOR 4 FLOW ELEMENT 3 TEMP ELEMENT 18 PROCESS SWITCH 26 CONTROLLER 19 ANNUNCIATOR 25
235.	OTHER TURBINE PLANT EQUIP.	
235.1	MAIN VAPOR PIPING SYSTEM	
235.11	MAIN STEAM SYSTEM	
235.115	PIPING	
235.1151	2 IN + SMALLER	
235.11511	CS/NNS	
235.1152	2.5 IN + LARGER	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
235.11521	CS/NNS	
235.115211	CS/NNS	
235.115212	CS/NNS	
235.11522	CS/SC 2	
235.116	VALVES	
235.1161	GATE	
235.1162	CHECK	
235.1163	GLOBE	
235.1165	RELIEF	
235.1166	BUTTERFLY	
235.117	PIPING-MISC ITEMS	
235.1171	HANGERS + SUPPORTS	
235.1172	INSULATION	
235.1173	SPECIALTIES	
235.11731	CONTAINMENT PENETRATIONS	INCLUDED IN ACCOUNT 212.1461
235.11732	STEAM TRAPS + STRAINERS	
235.118	INSTRUMENTATION+CONTROL	TRANSMITTER 26 LOCAL INDICATOR 27 BOARD MOUNTED INDICATOR 34 RECORDER 3 FLOW ELEMENT 2 TEMP ELEMENT 22 TEMP TRANSMITTER 10 PROCESS SWITCH 12 CONTROLLER 2 ANNUNCIATOR 15 MISC. 12
235.14	MAIN VAPOR PIPE WHIP RES.	ALLOWANCE

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
235.141	PLATE	
235.142	SHEAR LUGS	
235.143	ANCHORS	
235.144	BEAMS	
235.145	U-BOLT + NUTS	
235.146	WELDS	
235.147	ELASTO-PLASTIC MATERIAL	
235.2	TURBINE AUXILIARIES	
235.21	MN STM/REHEAT VENTS + DRNS	
235.215	PIPING	
235.2151	2 IN. + SMALLER	
235.21511	CS/NNS	
235.2152	2.5IN + LARGER	
235.216	VALVES	
235.2163	GLOBE	
235.217	PIPING-MISC. ITEMS	
235.2171	HANGERS + SUPPORTS	
235.2172	INSULATION	
235.2173	SPECIALTIES	
235.3	TB CLOSED CLG WATER SYS	
235.31	ROTATING MACHINERY	
235.311	TB CLOSED CLG WTR PUMP	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
235.3111	TB CCW PUMP	QUANTITY 3 X 50 PCT. TYPE CENTRIFUGAL ORIENTATION HORIZONTAL FLOW RATE 4,600 GPM SPEED 1,775 RPM TDH 120 FT BHP 168 HP NPSH 16 FT EFFICIENCY 83 PCT. DESIGN PRESS 250 PSIG DESIGN TEMP 150 F MATERIAL CAST IRON CASING CHROME STEEL IMPELLER SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
235.3112	TB CCW PUMP MOTOR	TYPE AC INDUCTION HORSEPOWER 200 HP SPEED 1,800 RPM VOLTAGE 460 V, 3 PH, 60 HZ
235.32	HEAT TRANSFER EQUIPMENT	
235.321	HEAT EXCHANGERS	QUANTITY 2 X 50 PCT. TYPE SHELL AND TUBE TEMA TYPE AFL ORIENTATION HORIZONTAL HEAT LOAD 2.9 E07 BTU/HR SURFACE AREA 11,600 SQ FT SHELL CONDITION DES.PRES/TEMP 150 PSIG / 150 F TEMP IN/OUT 108 F / 95 F FLOW RATE 4,600 GPM MATERIAL CARBON STEEL TUBE CONDITION QUANTITY 2,955 X 20 FT LENGTH SIZE 3/4 IN O.D. 18 BWG DES.PRES/TEMP 150 PSIG / 100 F TEMP IN/OUT 85 F / 98 F FLOW RATE 4,600 GPM MATERIAL 90:10 CU-NI SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME SECTION VIII

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

235.33 TANKS + PRESSURE VESSELS

235.331 HEAD TANK

QUANTITY	1
ORIENTATION	HORIZONTAL
DIMENSIONS	
VOLUME	700 GAL
DESIGN PRES.	15 PSIG
DESIGN TEMP.	100 F
MATERIAL	AS1M A283 GRC
SAFETY CLASS	NNE
SEISMIC CAT.	NOME
DESIGN CODE	API

235.35 PIPING

235.351 2 IN. + SMALLER

235.3511 CS/NNS

235.352 2.5 IN + LARGER

235.3521 CS/NNS

235.36 VALVES

235.361 GATE

235.362 CHECK

235.363 GLOBE

235.365 RELIEF

235.366 BUTTERFLY

235.368 PLUG

235.37 PIPING-MISC. ITEMS

235.371 HANGERS + SUPPORTS

235.372 INSULATION

235.373 SPECIALTIES

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
235.38	INSTRUMENTATION + CONTROL	TRANSMITTER 4 LOCAL INDICATOR 76 BOARD MOUNTED INDICATOR 4 PROCESS SWITCH 2 CONTROLLER 1 ANNUNCIATOR 1 MISC. 12
235.4	DEMIN. WATER MAKE-UP SYSTEM	TYPE - ACTIVATED CARBON PREFILTERS, FOLLOWED BY CATION-ANION MIXED BED DEMINERALIZERS, ARRANGED IN TWO TRAINS WITH COMMON VACUUM DEGASIFIER. FLOW RATE 480,000 GPD SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE ASME SECTION VIII
235.43	TANKS + PRESSURE VESSELS	
235.431	DEMINERALIZED WATER STG TK	QUANTITY 1 ORIENTATION VERTICAL DIMENSIONS 32FT DIA X 33FT ST. SIDE VOLUME 200,000 GAL DESIGN PRESS. ATMOSPHERIC DESIGN TEMP 100 F MATERIAL S.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
235.45	PIPING	
235.451	2 IN + SMALLER	
235.4511	CS/NNS	
235.452	2.5 IN + LARGER	
235.4521	CS/NNS	
235.46	VALVES	
235.47	PIPING-MISC ITEMS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
235.48	INSTRUMENTATION + CONTROL	ALLOWANCE
235.49	SKIDS / FOUNDATIONS	
235.491	DEMINERALIZER PACKAGE	
235.4911	ROTATING MACHINERY	
235.49111	ACID REGENERANT P+M	
235.491111	ACID REGENERANT PUMP	QUANTITY 2 X 100 PCT. TYPE POSITIVE DISPLACEMENT ORIENTATION HORIZONTAL FLOW RATE 0 - 190 GPH SPEED TDH 100 PSIG BHP NPSH 10 FT EFFICIENCY DESIGN PRES. 150 PSIG DESIGN TEMP. 100 F MATERIAL ALLOY 20 SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
235.491112	ACID REGENERANT PUMP MOTOR	TYPE HORSEPOWER 3/4 HP SPEED VOLTAGE 460V, 3 PH, 60 HZ
235.49112	CAUSTIC REGENERANT P+M	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
235.491121	CAUSTIC REGEN PUMP	<p>QUANTITY 2 X 50 PCT TYPE POSITIVE DISPLACEMENT ORIENTATION HORIZONTAL FLOW RATE 0 - 85 GPH SPEED TDH 100 PSIG BHP NPSH 10 FT EFFICIENCY DESIGN PRESS 150 PSIG DESIGN TEMP 100 F MATERIAL 316 S.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE</p>
235.491122	CAUSTIC REGEN PUMP MOTOR	<p>TYPE HORSEPOWER 3/4 HP SPEED VOLTAGE 460 V, 3 PH, 60 HZ</p>
235.49113	DEGASIFIER EVACUATING P+M	
235.491131	DEGASIFIER EVAC PUMP	<p>QUANTITY 3 X 50 PCT. TYPE ROTARY - WATER SEALED ORIENTATION FLOW RATE 260 ACFM AT 20 MM HG.A SPEED TDH BHP NPSH EFFICIENCY DESIGN PRES. DESIGN TEMP. MATERIAL C.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE</p>
235.491132	DEGASIFIER EVAC PUMP MOTOR	<p>TYPE HORSEPOWER 3/4 HP SPEED VOLTAGE</p>
235.49114	DEGASIFIER BOOSTER P+M	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
235.491141	DEGASIFIER BOOSTER PUMP	QUANTITY 2 X 100 PCT TYPE CENTRIFUGAL ORIENTATION HORIZONTAL FLOW RATE 335 GPM SPEED 1,800 RPM TDH 200 FT BHP 21 HP EFFICIENCY 80 DESIGN PRES. 150 PSIG DESIGN TEMP. 100 F MATERIAL 316 S.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
235.491142	DEGASIFIER BOOSTER P MOTOR	TYPE AC INDUCTION HORSEPOWER 25 HP SPEED 1,800 RPM VOLTAGE 460V, 3 PH, 60 HZ
235.4913	TANKS + PRESSURE VESSELS	
235.49131	VACUUM DEGASIFIER	8 FT DIA. BY 7 FT HIGH STORAGE SECTION WITH 4 FT DIA. BY 18 FT HIGH TWO STAGE DEGASIFIER
235.49132	ACID REGENERANT DAY TANK	QUANTITY 1 ORIENTATION VERTICAL DIMENSIONS 2.5 FT DIA X 3 FT HIGH VOLUME 135 GAL DESIGN PRES. ATMOSPHERIC DESIGN TEMP. 100 F MATERIAL 10 GAUGE C.S. WITH 1/8 IN PLASTISOL LINER SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE API

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
235.49133	CAUSTIC REGENERANT DAY TK	<p>QUANTITY 1</p> <p>ORIENTATION VERTICAL</p> <p>DIMENSION 2.5FT DIA X 3.5FT HIGH</p> <p>VOLUME 215 GAL</p> <p>DESIGN PRES. ATMOSPHERIC</p> <p>DESIGN TEMP. 100 F</p> <p>MATERIAL 10 GAUGE C.S. WITH 1/8 IN PLASTISOL LINER</p> <p>SAFETY CLASS NNS</p> <p>SEISMIC CAT. NONE</p> <p>DESIGN CODE API</p>
235.4914	PURIFICATION+FILTRATION EQ	
235.49141	FILTERS	<p>QUANTITY - 2 X 100 PERCENT</p> <p>TYPE - CHARCOAL</p> <p>FILTER MEDIA - 200 CU FT CARBON</p> <p>VESSEL SIZE - 8.5 FT DIA</p> <p>FLOW RATE - 335 GPM</p> <p>DESIGN PRESS - 100 PSIG</p> <p>DESIGN TEMP - 100 F</p> <p>DIFF. PRESS -</p> <p>CLEAN/DIRTY -</p> <p>RATING/SIZE -</p> <p>MATERIAL - CS</p> <p>DIRT CAPACITY -</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT. - NONE</p> <p>DESIGN CODE - ASME SECTION VIII</p>

EQUIPMENT LIST - REPORT 1

09/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
235.49142	CATION ION EXCHANGE BEDS	QUANTITY - 2 X 100 PERCENT ORIENTATION - VERTICAL RESIN TYPE - IR-200, STRONG ACID RESIN SIZE - 6 FT DIA RESIN VOLUME - 135 CU FT FLOW RATE - 335 GPM FREEBOARD - - BED DEPTH - - DESIGN PRESS - 100 PSIG DESIGN TEMP - 100 F MATERIAL - CS W RUBBER LINER, SS INTERNALS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME SECTION VIII
235.49143	ANION ION EXCHANGE BEDS	QUANTITY - 2 X 100 PERCENT ORIENTATION - VERTICAL IRA-402, STRONG BASE SIZE - 6 FT DIA RESIN VOLUME - 90 CU FT FLOW RATE - 335 GPM FREEBOARD - - BED DEPTH - - DESIGN PRESS - 100 PSIG DESIGN TEMP - 100 F MATERIAL - CS W RUBBER LINER, SS INTERNALS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME SECTION VIII

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
235.49144	MIXED-BED ION EXCHANGE BED	QUANTITY - 2 X 100 PERCENT ORIENTATION - VERTICAL IR-120, STRONG ACID RES IRA-402, STRONG BASE RES SIZE - 6 FT DIA RESIN VOLUME 30 CU FT: IR-120 40 CU FT: IRA-402 FLOW RATE - 335 GPM FREEBOARD - - BED DEPTH - - DESIGN PRESS - 100 PSIG DESIGN TEMP - 100 F MATERIAL - CS W RUBBER LINER, SS INTERNALS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME SECTION VIII
235.492	DEMIN WTR ST TK FOUNDATION	
235.4921	EXCAVATION WORK	
235.4922	SUBSTRUCTURE CONCRETE	
235.49221	FORMWORK	
235.49222	REINFORCING STEEL	
235.49223	CONCRETE	
235.49224	EMBEDDED STEEL	
235.4923	SAND FILL	
235.5	CHEMICAL TREATMENT SYSTEM	
235.51	ROTATING MACHINERY	
235.511	AMMONIA FEED PUMP + MOTOR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
235.5111	AMMONIA FEED PUMP	QUANTITY 2 X 100 PCT. TYPE POSITIVE DISPLACEMENT ORIENTATION HORIZONTAL FLOW RATE 5 GPH AT 900 PSIG SPEED TDH 900 PSIG BHP NPSH EFFICIENCY DESIGN PRES. 1000 PSIG DESIGN TEMP. 100 F MATERIAL WETTED PARTS 316 SS SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE CONTROL AUTOMATIC ON CHEMICAL DEMAND
235.5112	AMMONIA FEED PUMP MOTOR	TYPE HORSEPOWER 3.4 HP SPEED VOLTAGE 450V, 3 PH, 60 HZ
235.512	HYDRAZINE FEED PUMP+MOTOR	
235.5121	HYDRAZINE FEED PUMP	QUANTITY 2 X 100 PCT. TYPE POSITIVE DISPLACEMENT ORIENTATION HORIZONTAL FLOW RATE 5 GPH AT 900 PSIG SPEED TDH 900 PSIG BHP NPSH EFFICIENCY DESIGN PRES. 1000 PSIG DESIGN TEMP. 100 F MATERIAL WETTED PARTS 316 SS SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE CONTROL AUTOMATIC ON CHEMICAL DEMAND

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
235.5122	HYDRAZINE FEED PUMP MOTOR	TYPE HORSEPOWER 3/4 HP SPEED VOLTAGE 460V, 3 PH, 60 HZ
235.53	TANKS + PRESSURE VESSELS	
235.531	AMMONIA STORAGE TANK	QUANTITY 1 ORIENTATION VERTICAL DIMENSIONS 2.5 FT DIA X 3 FT HIGH VOLUME 100 GAL DESIGN PRES. ATMOSPHERIC DESIGN TEMP. 100 F MATERIAL 304 S.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE API
235.532	HYDRAZINE STORAGE TANK	QUANTITY 1 ORIENTATION VERTICAL DIMENSIONS 2.5 FT DIA X 3 FT HIGH VOLUME 100 GAL DESIGN PRES. ATMOSPHERIC DESIGN TEMP. 100 F MATERIAL 304 S.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE API
235.55	PIPING	
235.551	2 IN + SMALLER	
235.5511	SS/NNS	
235.552	2.5 IN + LARGER	
235.56	VALVES	
235.563	GLOBE	
235.57	PIPE-MISC. ITEMS	
235.571	HANGERS + SUPPORTS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
235.572	INSULATION	
235.573	SPECIALTIES	
235.58	INSTRUMENTATION + CONTROL	LOCAL INDICATOR 4 PROCESS SWITCH 4 MISC. 2
235.6	NEUTRALIZATION SYSTEM	
235.61	ROTATING MACHINERY	
235.611	OVERBOARD/RECIR PUMP+MOTOR	
235.6111	OVERBOARD/RECIR PUMP	QUANTITY 2 X 100 PERCENT TYPE 14-LINE CENTRIFUGAL ORIENTATION VERTICAL FLOW RATE 300 GPM SPEED 1750 RPM TDH 40 FT BHP 4.1 HP NPSH 10 FT EFFICIENCY 74 PERCENT DESIGN PRES. 100 PSIG DESIGN TEMP. 100 F MATERIAL 316 SS SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
235.6112	OVERBOARD/RECIR PUMP MOTOR	TYPE OPEN DRIP PROOF HORSEPOWER 5 HP SPEED 1800 RPM VOLTAGE 460V, 3 PH, 60 HZ
235.612	BLOWER + MOTOR	
235.6121	BLOWER	QUANTITY 2 X 100 PERCENT TYPE ROOTS BLOWER CAPACITY 1600 CFM AT 5 PSIG MATERIAL CS

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
235.6122	BLOWER MOTOR	TYPE HORSEPOWER SPEED VOLTAGE 460 V, 3 PH, 60 HZ
235.63	TANKS AND PRESSURE VESSELS	
235.631	NEUTRALIZATION TANK	QUANTITY 1 ORIENTATION HORIZONTAL DIMENSIONS 12 FT DIA X 34 FT LONG VOLUME 30,000 GAL DESIGN PRES. ATMOSPHERIC DESIGN TEMP. 100 F MATERIAL FIBERGLASS SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE TANK INTERNALS AIR DISTRIBUTER HEADERS LATERALS AND SPARGERS OF PVC MATERIAL
235.65	PIPING	
235.651	2IN & SMALLER	
235.6511	CS/NNS	
235.652	2.5 IN & LARGER	
235.6521	CS/NNS	
235.66	VALVES	
235.67	PIPING - MISC ITEMS	
235.671	HANGERS + SUPPORTS	
235.672	INSULATION	
235.673	SPECIALTIES	
235.68		
236.	INSTRUMENTATION + CONTROL	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
236.1	PROCESS IC EQUIPMENT	
236.11	BENCHBOARD, PANELS + RACKS	
236.111	TURBINE PLT MAIN CONTRL BD	MAIN STEAM FEEDWATER HEATER VENTS AND DRAINS TURBINE CIRCULATING WATER CONDENSATE TOTAL:20 FEET DUPLEX BOARD SEE 243.11 FOR ELECTRICAL SECTION OF BOARD
236.112	TURBINE PANELS	
236.1121	TURBINE SUPERVISORY PANELS	FURNISHED W/231.1
236.1122	EHC CONTROL CABINET	FURNISHED W/231.1
236.1123	TURBINE ACCESSORY PANELS	TG CONTROL PANELS HYDROGEN AND COOLING WATER CABINET TURING GEAR MOTOR PANEL PRESSURE TRANSDUCER PANEL EXCITATION CONTROL CUBICLE REHEATER PROTECTION PIPING CTL PANEL TURBINE SUPERVISORY INSTRUMENT CABINET ALL FURNISHED W/231.1
236.113	TURBINE PLANT HVAC PANELS	TURBINE BUILDING AIR HANDLING INTAKE STRUCTURE VENTILATION ADMINISTRATION BUILDING HVAC
236.114	LOGIC PANELS+ CABINETS	COMPRESSED AIR AUX. BOILER AND AJX. SYSTEMS FIRE DETECTION DEMINERALIZED WATER MAKEUP & CONDENSATE POLISHING STATUS OTHER TURBINE PLANT SYSTEMS
236.115	INSTRUMENT RACK-TURB PLANT	LOCAL INSTRUMENT RACKS - 57
236.13		INCLUDED IN ACCOUNT 231.1
236.2	PROCESS COMPUTER	INCLUDED IN ACCOUNT 227.2

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
236.3	TURB PLT I+C TUBING	INSTRUMENT STRONG BACKS - 30 LINEAR FEET OF TUBING - 28,300
237.	TURBINE PLANT MISC ITEMS	
237.1	MISC SUSPENSE ITEMS	
237.11	PIPE	
237.12	FIELD PAINTING	ALLOWANCE FOR PAINTING OF ALL TURBINE PLANT EQUIPMENT AND PIPING.
237.13	QUALIFICATION OF WELDERS	ALLOWANCE FOR QUALIFYING WELDERS AND WELDING PROCEDURES.
237.3	TURBINE PLANT INSULATION	
237.31	PIPE INSULATION	TOTAL COST OF TURBINE PLANT PIPE INSULATION.
237.32	EQUIPMENT INSULATION	TOTAL COST OF TURBINE PLANT EQUIPMENT INSULATION.
24 .	ELECTRIC PLANT EQUIPMENT	
241.	SWITCHGEAR	
241.1	GEN EQPT SWITCHGEAR	
241.11	GEN LOAD BREAK SWITCH	THREE SINGLE POLE METAL ENCLOSED LOAD BREAK SWITCHES WITH WATER COOLED CONDUCTORS PLUS ONE SPARE POLE : NOMINAL VOLTAGE 25 KV RATED MAX VOLTAGE 36 KV RATED FREQUENCY 60 HZ RATED CONT. CURRENT : (FORCED COOLED/SELF COOLED) 35/19.25KA RATED BREAKING CURRENT AT 24.5 KV (SYMMETRICAL) 35 KA RATED MAKING CURRENT (PEAK) 450 KA

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
241.12	GEN NEUTRAL GROUNDING EQPT	GENERATOR NEUTRAL GROUNDING CUBICLE CONSISTING OF : TRANSFORMER-- 37.5 KVA, SINGLE PHASE 22900-120/240 VOLTS VENTILATED, DRY-TYPE SELF-COOLED, 150 KV BIL RESISTOR--INDOOR, 0.307 OHMS RESISTANCE 600 VOLTS
241.13	GEN CURRENT+POTENTIAL XFMR	
241.131	GEN. CURRENT TRANSFORMERS	GENERATOR PROVIDED WITH 3 CT'S PER BUSHING RATED AT 35 KA
241.132	GEN. POTENTIAL TRANSFORMERS	GENERATOR PROVIDED WITH 6 PT'S RATED AT 26400-120/120 VOLTS
241.14	GEN SURGE PROTECTION EQPT	GENERATOR PROVIDED WITH ONE 30 KV LIGHTNING ARRESTER AND ONE 0.125 MICRO FARAD CAPACITOR PER PHASE
241.15	GEN EXCITATION SWITCHGEAR	GENERATOR PROVIDED WITH EXCITATION SWITCHGEAR CONSISTING OF EXCITER FIELD CIRCUIT BREAKER AND VOLTAGE REGULATOR
241.2	STATION SERVICE SWITCHGEAR	
241.21	MEDIUM VOLTAGE METAL CLAD	
241.211	13.8 KV	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
241.2111	NON-CLASS 1E 13.8 KV	<p>TWO 13.8 KV BUSES CONSISTING OF INDOOR METAL CLAD SWITCHGEAR :</p> <p>NOMINAL VOLTAGE : 15 KV NOMINAL MVA CLASS : 750 MVA CONTINUOUS CURRENT- INCOMING LINE ACB : 2000 A FEEDER ACB : 1200 A BUS : 2000 A RATED SHORT CIRCUIT CURRENT: 28000 A RMS@15 KV INTERRUPTING TIME: 5 CYCLES CLOSING AND LATCHING CAPABILITY : 58000 A, RMS</p> <p>QUANTITIES - INCOMING LINES: 4 FEEDER: 31 PT COMPT'S: 6 SPACE: 2</p> <p>EACH BUS IS COMPLETE WITH METERING, PROTECTIVE RELAYING, AND CONTROL LOGIC</p>
241.2112	CLASS 1E 13.8 KV	
241.212	6.9 KV	
241.2121	NON-CLASS 1E 6.9 KV	
241.2122	CLASS 1E 6.9 KV	
241.213	4.16 KV	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
241.2131	NON-CLASS 1E 4.16 KV	<p>TWO 4.16 KV BUSES CONSISTING OF INDOOR METAL CLAD SWITCHGEAR :</p> <p>NOMINAL VOLTAGE : 5 KV</p> <p>NOMINAL MVA CLASS : 350 MVA</p> <p>CONTINUOUS CURRENT -</p> <p>INCOMING LINE ACB : 1200 A</p> <p>FEEDER ACB : 1200 A</p> <p>BUS : 1200 A</p> <p>RATED SHORT CIRCUIT CURRENT: 41000 A, RMS@4.76 KV</p> <p>INTERRUPTING TIME : 5 CYCLES</p> <p>CLOSING AND LATCHING CAPABILITY : 78000 A, RMS</p> <p>QUANTITIES -</p> <p>INCOMING LINE : 4</p> <p>FEEDER : 17</p> <p>SPACE : 2</p> <p>PT COMP'TS : 6</p> <p>EACH BUS IS COMPLETE WITH METERING, PROTECTIVE RELAYING, AND CONTROL LOGIC</p>
241.2132	CLASS 1E 4.16 KV	<p>TWO 4.16 KV BUSES CONSISTING OF INDOOR METAL CLAD SWITCHGEAR QUALIFIED AS CLASS 1E EQUIPMENT :</p> <p>NOMINAL VOLTAGE : 5 KV</p> <p>NOMINAL MVA CLASS : 350 MVA</p> <p>CONTINUOUS CURRENT -</p> <p>INCOMING LINE : 2000 A</p> <p>FEEDER : 1200 A</p> <p>BUS : 2000 A</p> <p>RATED SHORT CIRCUIT CURRENT: 41000 A, RMS@4.76 KV</p> <p>INTERRUPTING TIME : 5 CYCLES</p> <p>CLOSING AND LATCHING CAPABILITY : 78000 A, RMS</p> <p>QUANTITIES -</p> <p>INCOMING LINE : 6</p> <p>FEEDER : 25</p> <p>PT COMP'TS : 8</p> <p>SPACE : 2</p> <p>EACH BUS IS COMPLETE WITH METERING, PROTECTIVE RELAYING, AND CONTROL LOGIC</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
241.214	D-G LD. SEQ. LOGIC PNLS	TWO LOGIC CABINETS COMPLETE WITH FREE STANDING METAL ENCLOSURE, WIRING AND LOGIC FOR DIESEL-GENERATOR LOAD SEQUENCING AND CLASS 1E BUS SWITCHING
241.22	STATION MOTOR CONTROL CNTR	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
241.221	NON-CLASS 1E 480 V MCC	<p>TWENTY-FOUR MOTOR CONTROL CENTERS OF STANDARD NEMA CLASS 1 CONSTRUCTION WITH TYPE B WIRING, DRAWOUT TYPE, A 600A HORIZONTAL BUS, A 300A VERTICAL BUS AND BRACED FOR 42000A, RMS, SYMMETRICAL : MOTOR FEEDERS (COMBINATION STARTERS)</p> <p>CONTACTOR : 3 POLE, 600V, FULL VOLTAGE MAGNETIC, SIZE 1 TO SIZE 4</p> <p>CIRCUIT BREAKERS : 600V, 25000 AIC, ADJUSTABLE INSTANTANEOUS MAGNETIC TRIP, MOLDED CASE TYPE</p> <p>THERMAL OVERLOAD UNIT : ONE PER PHASE</p> <p>CONTROL TRANSFORMER : ONE PER STARTER 480-120 V.</p> <p>MISC. FEEDERS (COMBINATION CONTACTORS) SIMILAR TO MOTOR FEEDERS EXCEPT SIZE 1, SIZE 2 AND SIZE 4 ONLY, THERMAL MAGNETIC CIRCUIT BREAKERS AND NO THERMAL OVERLOAD UNITS</p> <p>LIGHTING AND MISC LOADS</p> <p>CIRCUIT BREAKER : 600V, 25000 AIC, THERMAL, MAGNETIC, MOLDED CASE TYPE</p> <p>SPACE HEATER LOAD (SHL) PACKAGE</p> <p>MAIN CIRCUIT BREAKER : 600V, 25000 AIC THERMAL, MAGNETIC, MOLDED CASE TYPE</p> <p>TRANSFORMER : 7.5 OR 15 KVA SINGLE PHASE, 480-120/240V, 60 HZ, DRY TYPE</p> <p>DISTRIBUTION PANEL : 12 OR 24 SINGLE POLE, 20A, E FRAME ACB; 120/240 V, 3 WIRE</p> <p>QUANTITIES --</p> <p>FULL VOLTAGE, SINGLE SPEED, NONREVERSING COMBINATION STARTERS</p> <p>NEMA SIZE 1 - 224, NEMA SIZE 2 - 66</p> <p>NEMA SIZE 3 - 35, NEMA SIZE 4 - 22</p> <p>FULL VOLTAGE, SINGLE SPEED, REVERSING COMBINATION STARTERS</p> <p>NEMA SIZE 1 - 95</p> <p>FULL VOLTAGE, NON-REVERSING COMBINATION CONTACTORS</p> <p>NEMA SIZE 1 - 18, NEMA SIZE 4 - 1</p> <p>CIRCUIT BREAKERS</p> <p>100A FRAME -- 101, 225A FRAME -- 10</p> <p>SHL PACKAGES 24 CIRCUIT -- 21</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
241.222	CLASS 1E 480 V MCC	<p>SIMILAR TO THE DESCRIPTION OF ACCOUNT 241.221 EXCEPT THAT THERE ARE TWENTY MOTOR CONTROL CENTERS AND EACH HAS BEEN QUALIFIED AS CLASS 1E EQUIPMENT. QUANTITIES --</p> <p>FULL VOLTAGE, SINGLE SPEED, NON-REVERSING COMBINATION STARTERS</p> <p>NEMA SIZE 1 - 91, NEMA SIZE 2 - 41</p> <p>NEMA SIZE 3 - 17, NEMA SIZE 4 - 7</p> <p>FULL VOLTAGE, SINGLE SPEED REVERSING COMBINATION STARTERS</p> <p>NEMA SIZE 1 - 94, NEMA SIZE 2 - 28</p> <p>FULL VOLTAGE, NON-REVERSING COMBINATION CONTACTORS</p> <p>NEMA SIZE 1 - 5, NEMA SIZE 2 - 4</p> <p>CIRCUIT BREAKERS</p> <p>100A FRAME -- 42, 225A FRAME -- 1</p> <p>SHL PACKAGES</p> <p>12 CIRCUIT -- 4, 24 CIRCUIT -- 16</p>
242.	STATION SERVICE EQUIPMENT	
242.1	STATION SERV&STARTUP XFMR	

EQUIPMENT LIST - REPORT 1

9/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
242.11	UNIT AUXILIARY TRANSFORMER	<p>TWO HALF SIZE TRANSFORMERS :</p> <p>TYPE - OUTDOOR, OIL INSULATED, THREE PHASE, THREE WINDING</p> <p>COOLING - OA/FA/FOA</p> <p>TEMP. RISE - 55 C</p> <p>RATING - H WINDING - 27/36/45 MVA X WINDING - 21/28/35 MVA Y WINDING - 10/13.3/16.7 MVA</p> <p>VOLTAGE - H WINDING - 24.5 KV X WINDING - 13.8 KV Y WINDING - 4.16 KV</p> <p>CONNECTIONS -</p> <p>H WINDING - DELTA</p> <p>X WINDING - WYE, HIGH RESIS- TANCE GROUNDED</p> <p>Y WINDING - WYE, HIGH RESIS- TANCE GROUNDED</p> <p>TAPS - TWO 2-1/2 PCT. FULL CAPACITY TAPS ABOVE AND BELOW NORMAL, DE- ENERGIZED OPERATION ON H WINDING</p> <p>BIL - H WINDING AND BUSHINGS - 150 KV X WINDING AND BUSHINGS - 110 KV Y WINDING AND BUSHINGS - 75 KV</p> <p>IMPEDANCE - H-X: 5.38 PCT. (@27 MVA) H-Y: 13.75 PCT. (@27 MVA)</p> <p>NOISE LEVEL - 83/65 DB(A) (OA/FA)</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
242.12	RESERVE AUXILIARY XFMR	<p>TWO HALF SIZE TRANSFORMERS :</p> <p>TYPE - OUTDOOR, OIL INSULATED, THREE PHASE, THREE WINDING</p> <p>COOLING - OA/FA/FOA</p> <p>TEMP. RISE - 55 C</p> <p>RATING - H WINDING - 27/36/45 MVA X WINDING - 21/28/35 MVA Y WINDING - 10/13.3/16.7 MVA</p> <p>VOLTAGE - H WINDING - 230 KV X WINDING - 13.8 KV Y WINDING - 4.16 KV</p> <p>CONNECTIONS -</p> <p>H WINDING - WYE, SOLID GROUND X WINDING - WYE, HIGH RESIS- TANCE GROUNDED Y WINDING - WYE, HIGH RESIS- TANCE GROUNDED</p> <p>TAPS - TWO 2-1/2 PCT. FULL CAPACITY TAPS ABOVE AND BELOW NORMAL, DE-ENERGIZED OPERATION ON H WINDING</p> <p>BIL - H WINDING AND BUSHINGS - 900 KV H WINDING NEUTRAL - 150 KV X WINDING AND BUSHINGS - 110 KV Y WINDING AND BUSHINGS - 75 KV</p> <p>IMPEDANCE - H-X: 5.64 PCT. (@27 MVA) H-Y: 13.98 PCT. (@27 MVA)</p> <p>NOISE LEVEL - 68/70 DB(A) (OA/FA)</p>
242.13	FOUNDATIONS FOR XFMRs	
242.131	EXCAVATION WORK	
242.1311	EARTH EXCAVATION	INCLUDED WITH STRUCTURE ASSOCIATED YARDWORK
242.1312	ROCK EXCAVATION	NONE
242.1313	CONCRETE FILL	NONE
242.1314	FILL + BACKFILL	INCLUDED WITH STRUCTURE ASSOCIATED YARDWORK
242.1315	DEWATERING	INCLUDED WITH STRUCTURE ASSOCIATED YARDWORK

EQUIPMENT LIST - REPORT 1

JUL 29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
242.132	SUBSTRUCTURE CONCRETE	
242.1321	FORMWORK	
242.1322	REINFORCING STEEL	
242.1323	CONCRETE	
242.1324	EMBEDDED STEEL	
242.1325	FLOOR FINISH	NONE
242.1326	WATERPROOFING	NONE
242.1327	CONSTRUCTION JOINTS	
242.1328	RUBBING CONCRETE SURFACES	
242.133	CRUSHED STONE FILL	
242.2	UNIT SUBSTATIONS	
242.21	LOAD CENTER SWITCHGEAR	
242.211	NON-CLASS 1E SWITCHGEAR	
242.2111	CLG TOWER+ FIRE PUMP HOUSE	<p>(9)- 480V LOAD CENTER BUSES CONSISTING OF INDOOR DEAD FRONT METAL-ENCLOSED SWITCHGEAR :</p> <p>TYPE - ELECTRIC OR MANUAL OPERATION, STORED ENERGY DRAW-OUT, THREE POLE / SINGLE THROW WITH DIRECT ACTING OVER-CURRENT TRIPPING DEVICE.</p> <p>VOLTAGE - 600V</p> <p>MAIN BUS RATING - 1600A</p> <p>FRAME SIZE - INCOMING LINE - 1600A</p> <p>LOAD FEEDER 600A</p> <p>MOTOR FEEDER 600A</p> <p>INTERRUPTING RATING</p> <p>1600A FRAME-50000A@480V</p> <p>600A FRAME-30000A@480V WITH L,I TRIP</p> <p>QUANTITIES -1600A FRAME - 8</p> <p>600A FRAME - 39</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
242.2112	BALANCE OF PLANT-NO CT+FPH	<p>(18)- 480V LOAD CENTER BUSES CONSISTING OF INDOOR DEAD FRONT METAL-ENCLOSED SWITCHGEAR :</p> <p>TYPE - ELECTRIC OR MANUAL OPERATION, STORED ENERGY DRAW-OUT, THREE POLE, SINGLE THROW WITH DIRECT ACTING OVER-CURRENT TRIPPING DEVICE.</p> <p>VOLTAGE - 600V</p> <p>MAIN BUS RATING 2000A</p> <p>FRAME SIZE -INCOMING LINE - 1600A</p> <p>MCC FEEDER 1600A</p> <p>MOTOR FEEDER 600A</p> <p>INTERRUPTING RATING</p> <p>1600A FRAME-50000A@480V</p> <p>600A FRAME-30000A@480V WITH L,I TRIP</p> <p>QUANTITIES - 1600A FRAME - 48</p> <p>600A FRAME - 34</p>
242.212	CLASS 1E SWITCHGEAR	<p>SIMILAR TO THE DESCRIPTION OF ACCOUNT 242.2112 EXCEPT THERE ARE EIGHT BUSES AND ALL EQUIPMENT IS QUALIFIED CLASS 1E</p> <p>QUANTITIES - 2000A FRAME - 12</p> <p>1600A FRAME - 19</p> <p>600A FRAME - 11</p>
242.22	LOAD CENTER TRANSFORMERS	
242.221	NON-CLASS 1E TRANSFORMERS	
242.2211	CLG TOWER+FIRE PUMP HOUSE	<p>INDOOR VENTILATED DRY TYPE TRANSFORMERS COMPLETE WITH CONTROL AND PROTECTION EQUIPMENT :</p> <p>RATING -- 750 KVA</p> <p>COOLING -- AA</p> <p>VOLTAGE -- 13800-480V AND 4160-480V</p> <p>TEMP. RISE - 150 C</p> <p>CONNECTION - DELTA - WYE</p> <p>IMPEDANCE -- 3.9 PCT. @ 750 KVA</p> <p>QUANTITY -- 13800-480V - 8</p> <p>4160-480V - 1</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
242.2212	BALANCE OF PLANT-NO CT+FPH	INDOOR VENTILATED DRY TYPE TRANSFORMERS COMPLETE WITH CONTROL AND PROTECTION EQUIPMENT : RATING -- 750 KVA COOLING -- AA VOLTAGE -- 13800 - 480 VOLTS TEMP. RISE - 150 C CONNECTION - DELTA - WYE IMPEDANCE -- 3.9 PCT. @ 750 KVA QUANTITY -- 18
242.222	CLASS 1E TRANSFORMERS	INDOOR VENTILATED DRY TYPE TRANSFORMERS COMPLETE WITH CONTROL AND PROTECTION EQUIPMENT AND QUALIFIED AS CLASS 1E EQUIPMENT : RATING -- 1000/1333 OR 750 KVA COOLING -- AA/FA OR AA VOLTAGE -- 4160-480V TEMP. RISE - 150 C CONNECTION - DELTA - WYE IMPEDANCE -- STANDARD QUANTITY -- 1000/1333 KVA - 6 750 KVA - 2
242.23	MISCELLANEOUS XFMRs	ALLOWANCE
242.3	AUXILIARY POWER SOURCES	
242.31	BATTERY SYSTEMS	
242.311	STATION BATTERIES	
242.3111	NON-CLASS 1E BATTERY	TWO 125V BATTERIES CONFIGURED AS ONE 125/250 VOLTS, 3 WIRE BATTERY TYPE -- LEAD ANTIMONY NO. OF CELLS -- 60 EACH NOMINAL CAPACITY (28 HR DISCHARGE RATE)- 2250 AH EACH COMPLETE WITH BATTERY RACKS

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
242.3112	CLASS 1E BATTERY	FOUR BATTERIES CONFIGURED AS TWO BATTERIES PER SAFETY DIVISION. EACH BATTERY IS QUALIFIED AS CLASS 1E EQUIPMENT : VOLTAGE -- 125 VDC TYPE --- LEAD ANTIMONY NO. OF CELLS - 60 EACH NOMINAL AMPERE-HOURS - 1000 AH EACH (28 HR DISCHARGE RATE) COMPLETE WITH SEISMIC BATTERY RACKS
242.312	BATTERY CHARGERS	
242.3121	NON-CLASS 1E CHARGER	THREE BATTERY CHARGERS (TWO INSTALLED AND ONE STORED SPARE) TO SUPPLY THE NON-ESSENTIAL 125/250 VDC BUS: NOMINAL RATING -- 37.5 KW INPUT -- 480 VAC, 3 PHASE, 60 HZ OUTPUT -- 125 TO 140 VDC ADJUSTABLE OUTPUT CURRENT - 300 A
242.3122	CLASS 1E CHARGER	FIVE SOLID STATE CHARGERS (FOUR INSTALLED AND ONE STORED SPARE), CONFIGURED AS ONE PER CLASS 1E BATTERY AND ALL ARE QUALIFIED AS CLASS 1E EQUIPMENT: NOMINAL RATING -- 25 KW INPUT -- 480 VAC, 3 PHASE, 60 HZ OUTPUT - 125 TO 140 VDC ADJUSTABLE OUTPUT CURRENT - 200 A
242.32	EMERGENCY DIESEL GEN SYS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN FG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
242.321	DIESEL GENERATOR UNITS	<p>TWO REDUNDANT 6033 KW CLASS 1E SKID MOUNTED DIESEL GENERATORS :</p> <p>GENERATOR -NOMINAL RATING - 8375 KVA NOMINAL VOLTAGE- 4160 V POLES -- 14 POWER FACTOR -- 0.8 PHASE -- 3 PHASE, 3 WIRE CONNECTION - WYE</p> <p>ELECTRIC AUXILIARIES - STATIC EXCITER VOLTAGE REGULATOR, CONTROL PROTECTION, SURVEILLANCE</p> <p>ENGINE -NO. CYLINDERS - 16 SPEED -- 514 RPM</p> <p>MECHANICAL AUXILIARIES : FUEL OIL SYSTEM LUBE OIL SYSTEM COOLING WATER SYSTEM AIR INTAKE, EXHAUST AND CRANKCASE VACUUM SYSTEM STARTING AIR SYSTEM ELECTRIC GOVERNOR AND ENGINE CONTROL PANEL</p>
242.322	DIESEL GEN SUBSYSTEMS	
242.3221	ROTATING MACHINERY	
242.32211	FUEL OIL TRANSFER PUMP+MTR	
242.322111	FUEL OIL TRANS PUMP	<p>QUANTITY - 2 X 100 PCT. TYPE - POSITIVE DISPLACEMENT ORIENTATION - HORIZONTAL FLOW RATE - 25 GPM SPEED - 1,800 RPM TDH - 150 FT BHP - 1.6 HP NPSH - 21 FT EFFICIENCY - 60 PCT. DESIGN PRESS - 100 PSIG DESIGN TEMP - 150 F MATERIAL - C.S. SAFETY CLASS - 3 SEISMIC CAT. - I DESIGN CODE - ASME SECT III, CLASS 3</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
242.322112	FUEL OIL TRANS PUMP MOTOR	TYPE - AC INDUCTION HORSEPOWER - 2 HP SPEED - 1,800 RPM VOLTAGE - 460 V, 3 PH, 60 HZ
242.3223	TANKS AND PRESSURE VESSELS	
242.32231	7-DAY FUEL OIL TANKS	QUANTITY - 2 X 100 PCT. ORIENTATION - HORIZONTAL DIMENSIONS - 20 FT DIA X 38 FT O.H. VOLUME - 75,000 GAL DESIGN PRESS - ATMOSPHERIC DESIGN TEMP - 100 F MATERIAL - C.S. SAFETY CLASS - 3 SEISMIC CAT. - I DESIGN CODE - ASME SECT III, CLASS 3
242.3224	PURIFICATION+FILTRATION EQ	
242.32241	FUEL OIL STRAINERS	QUANTITY - 2 X 100 PCT. TYPE - DUPLEX FLOW RATE - 25 GPM DESIGN PRESS - 100 PSIG DESIGN TEMP - 100 F DIFF. PRESS: CLEAN/DIRTY - RATING/SIZE - MATERIAL - C.S. SAFETY CLASS - 3 SEISMIC CAT. - I DESIGN CODE - ASME SECT III, CLASS 3
242.3225	PIPING	
242.32251	2 IN + SMALLER	
242.322511	CS/SC 3	
242.32252	2.5 IN + LARGER	
242.322521	CS/SC 3	
242.3226	VALVES	ALLOWANCE

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION	
242.3227	PIPING - MISC ITEMS		
242.32271	HANGERS AND SUPPORTS	ALLOWANCE	
242.32272	INSULATION		
242.32273	SPECIALTIES		
242.3228	DIESEL GEN AUX SYS I+C		
242.32281	DIESEL GEN LUBE OIL I+C	LOCAL INDICATORS -	28
		BOARD MOUNTED INDICATOR -	4
		TEMPERATURE ELEMENTS -	2
		PROCESS SWITCHES -	14
		ANNUNCIATORS -	12
		MISCELLANEOUS -	10
242.32282	DG FUEL OIL I+C	LOCAL INDICATORS -	16
		BOARD MOUNTED INDICATORS -	10
		PROCESS SWITCHES -	18
		ANNUNCIATORS -	12
		MISCELLANEOUS -	8
242.32283	DG STARTING AIR I+C	LOCAL INDICATORS -	8
		PROCESS SWITCHES -	14
		ANNUNCIATORS -	8
		MISCELLANEOUS -	12
242.32284	DG JACKET WATER I+C	LOCAL INDICATORS -	34
		PROCESS SWITCHES -	16
		CONTROLLERS -	2
		ANNUNCIATORS -	10
		MISCELLANEOUS -	8
242.32285	DG INTAKE+EXHAUST I+C	LOCAL INDICATORS -	12
		TEMPERATURE ELEMENTS -	4
		PROCESS SWITCHES -	4
		ANNUNCIATORS -	4
		MISCELLANEOUS -	2
242.34	INVERTERS		

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
242.341	NON-CLASS 1E INVERTERS	TWO DUAL INPUT INVERTERS WITH STATIC TRANSFER SWITCHES, ONE AT 30 KVA DEDICATED TO COMPUTER USE AND ONE AT 20 KVA FOR AUXILIARY POWER: INPUTS - 480 VAC, 3 PHASE, OR 125 VDC OUTPUT - 118 VAC, SINGLE PHASE, 60 HZ
242.342	CLASS 1E INVERTERS	FOUR CLASS 1E DUAL INPUT SOLID STATE INVERTERS EACH SUPPLYING A VITAL 120 VAC BUS : NOMINAL RATING - 7.5 KVA INPUTS - 480 VAC, 3 PHASE, OR 125 VDC OUTPUT - 118 VAC, SINGLE PHASE, 60 HZ
243.	SWITCHBOARDS	
243.1	CONTROL PANELS	
243.11	GEN+AUX POWER SYS CTRL PNL	SIXTEEN FEET OF CONTROL DUPLEX BENCH-BOARD CONTAINING SWITCHES, ANNUNCIATORS AND RECORDING AND INDICATING INSTRUMENTS FOR CONTROL AND DATA ACQUISITION OF THE MAIN GENERATOR, AND AUXILIARY ELECTRIC POWER SYSTEM
243.12	CONSOLES	
243.13	VERTICAL PANELS	
243.14	GEN PROTECTIVE RELAY PANEL	ONE ELECTRIC SYSTEM RELAY PANEL, COMPOSED OF TWO GENERATOR, ONE UNIT AUXILIARY, AND TWO RESERVE AUXILIARY TRANSFORMER SUBPANELS, IS PROVIDED. IT CONTAINS ALL OF THE GENERATOR AND AUXILIARY TRANSFORMER PROTECTIVE FUNCTION CONTROL CIRCUITS, FUSES, AUXILIARY RELAYS AND AUXILIARY INSTRUMENT TRANSFORMERS
243.2	AUX. POWER & SIGNAL BOARDS	
243.21	POWER DISTRIBUTION PANEL	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
243.211	NOV-CLASS 1E AC PANELS	TWO 120/240 VOLT, 225 AMPERE, SINGLE PHASE, 3 WIRE WALL MOUNTED PANELBOARDS WITH 36 MOLDED CASE CIRCUIT BREAKER BRANCH CIRCUITS.
243.212	CLASS 1E AC PANFLS	FOUR CLASS 1E, 120 VOLT, 400 AMPERE, SINGLE PHASE, 2 WIRE WALL MOUNTED PANELBOARDS WITH 36 MOLDED CASE CIRCUIT BREAKER BRANCH CIRCUITS.
243.22	BATTERY CNTRL& DC DIST PNL	
243.221	NON-CLASS 1E DC PANELS	ONE 125/250 VOLT D-C, 1600 AMPERE, THREE WIRE METAL ENCLOSED SWITCHGEAR ASSEMBLY WITH MOLDED CASE AIR CIRCUIT BREAKERS IN THE MAINS AND BRANCH CIRCUITS
243.222	CLASS 1E DC PANELS	FOUR 125 VOLT D-C, 1200 AMPERE, TWO WIRE METAL ENCLOSED SWITCHGEAR QUALIFIED AS CLASS 1E EQUIPMENT AND WITH MOLDED CASE CIRCUIT BREAKERS IN THE MAINS AND BRANCH CIRCUITS
243.223	MISC.PUSHBUTTONS,PNLS+FUSE	ALLOWANCE
243.224	BATTERY FUSES	
244.	PROTECTIVE EQUIPMENT	
244.1	GENRL STATION GROUND SYS	
244.11	EQUIPMENT GROUNDING SYSTEM	A COMPLETE GROUNDING SYSTEM IS PROVIDED FOR EQUIPMENT AND RACEWAYS CONSISTING OF JUMPERS FROM CONDUIT TO GRID, A BARE COPPER WIRE IN AND BONDED TO TRAYS, A GROUND BUS MOUNTED IN ALL METAL ENCLOSURES, PIGTAILS FROM EQUIPMENT FRAMES TO GROUND GRID AND AN INSTRUMENT GROUNDING SYSTEMS.

EQUIPMENT LIST - REPORT 1

05/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
244.12	YARD + STRUCTURE GROUNDING	A COMPLETE YARD GROUNDING SYSTEM IS PROVIDED AS THE PLANT GROUNDING GRID CONSISTING OF BUILDING GROUND GRIDS AND INTERCONNECTIONS, COMPOSED OF BARE COPPER CONDUCTORS, GROUND RODS AND GROUNDING WELLS.
244.2	FIRE DETECTION+SUPPRESSION	DRY-PIPE DELUGE SPRAY AND FIRE DETECTION SYSTEMS ARE PROVIDED FOR THE MAIN AND AUXILIARY TRANSFORMERS, AND THE DIESEL-GENERATOR UNIT FUEL OIL STORAGE AND TRANSFER SYSTEM, DETECTION SYSTEMS ARE PROVIDED FOR THE CABLE TUNNELS AND ELECTRIC PENETRATION AREAS OUTSIDE THE CONTAINMENT.
244.3	LIGHTNING PROTECTION	SIX LIGHTNING PROTECTION MASTS COMPLETE WITH AIR TERMINALS, BASES, AND CONNECTIONS ARE PROVIDED FOR PROTECTION OF THE CONTAINMENT BUILDING AND LINER. UNDERWRITER LABORATORIES APPROVED LIGHTNING PROTECTION SCHEMES ARE PROVIDED FOR EACH SEISMIC CATEGORY I STRUCTURE.
244.4	CATHODIC PROTECTION	A COMPLETE SYSTEM WITH TRANSFORMER, RECTIFIER, ANODES, COKE BREEZE BEDS, SPECIAL WIRE AND TERMINATORS
244.5	HEAT TRACING + FREEZE PROT	A COMPLETE SYSTEM WITH HEAT TRACING WIRE, THERMAL CEMENT, THERMOSTATS CONTROL AND ALARMPANELS AND INTERCONNECTING POWER AND CONTROL WIRE AND RACEWAYS IS PROVIDED FOR CONCENTRATED BORIC ACID SYSTEMS AND FOR DIESEL-GENERATOR UNIT FUEL OIL PIPING AND SELECTED WATER PIPING LOCATED OUTDOORS
245.	ELECT.STRUC +WIRING CONTNR	
245.1	UNDERGROUND DUCT RUNS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
245.11	NON-CLASS 1E DUCT BANKS	POLYVINYL CHLORIDE TYPE DUCTS IN REINFORCED AND UNREINFORCED CONCRETE ENVELOPE WITH 18 REINFORCED CONCRETE MANHOLES
245.111	PVC DUCTS	
245.112	STEEL CONDUIT	
245.113	STRUCTURAL WORK	
245.1131	EXCAVATION WORK	INCLUDED WITH STRUCTURE ASSOCIATED YARDWORK
245.1132	SUBSTRUCTURE CONCRETE	
245.11321	FORMWORK	
245.11322	REINFORCING STEEL	
245.11323	CONCRETE	
245.12	CLASS 1E DUCT BANKS	POLYVINYL CHLORIDE TYPE DUCTS IN CATEGORY I REINFORCED CONCRETE ENVELOPE WITH 22 CATEGORY I REINFORCED CONCRETE MANHOLES
245.121	PVC DUCTS	
245.122	STEEL CONDUIT	
245.123	STRUCTURAL WORK	
245.1231	EXCAVATION WORK	INCLUDED WITH STRUCTURE ASSOCIATED YARDWORK
245.1232	SUBSTRUCTURE CONCRETE	
245.12321	FORMWORK	
245.12322	REINFORCING STEEL	
245.12323	CONCRETE	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
245.2	CABLE TRAY	<p>A COMPLETE CABLE TRAY RACEWAY SYSTEM IS PROVIDED COMPRISING LADDER TYPE TRAY FOR POWER CABLES AND CONTROL CABLES AND LADDER TRAY WITH SOLID COVERS AND BOTTOM PLATES FOR LOW-SIGNAL-LEVEL CABLES. ALL TRAYS AND FITTINGS ARE HOT-DIPPED GALVANIZED AFTER FABRICATION :</p> <p>SIZE 24 IN., 12 IN.</p> <p>QUANTITY 75000 LF</p>
245.3	CONDUIT	<p>A COMPLETE CONDUIT RACEWAY SYSTEM IS PROVIDED :</p> <p>TYPE GALVANIZED RIGID STEEL AND FLEXIBLE STEEL, INCLUDING PULL BOXES, FITTINGS AND HANGERS.</p> <p>QUANTITY 350000 LF</p>
246.	POWER & CONTROL WIRING	
246.1	GENERATOR CIRCUITS WIRING	
246.11	MAIN GENERATOR BUS DUCT	<p>ISOLATED PHASE DUCT :</p> <p>NOMINAL/MAX VOLTAGE 25/26.5 KV</p> <p>BIL 150 KV</p> <p>CONTINUOUS CURRENT</p> <p>MAIN BUS 35000A</p> <p>TAPS TO GSU 20000A</p> <p>TAPS TO UAT'S 3000A</p> <p>COOLING</p> <p>MAIN BUS FORCED COOLED</p> <p>TAPS TO UAT'S SELF COOLED</p> <p>SHORT CIRCUIT CURRENT (SYMM.)</p> <p>MAIN BUS 230KA</p> <p>TAPS TO UAT'S 337KA</p> <p>TAPS TO PT'S 340KA</p> <p>SHORT CIRCUIT CURRENT (ASSYMM. PEAK)</p> <p>MAIN BUS 369KA</p> <p>TAPS TO UAT'S 538KA</p> <p>TAPS TO PT'S 544KA</p> <p>TEMP. RISE 65 C</p> <p>LENGTH (INCL. ELBOW EQUIV.)</p> <p>MAIN BUS - 700- SINGLE PHASE FT</p> <p>TAPS TO UAT'S - 430- SINGLE PHASE FT</p>
246.12	DG UNIT BUS DUCT	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
246.2	STATION SERVICE PWR WIRING	
246.21	HIGH VOLTAGE BUS+CABLE	
246.211	BUS DUCT	
246.2111	15 KV BUS DUCT	
246.2112	8 KV BUS DUCT	
246.2113	5 KV BUS DUCT	
246.212	CABLE	
246.2121	15 KV CABLE	VOLTAGE 15 KV TYPE SINGLE CONDUCTOR WITH STRAND SHIELD, PRIMARY INSULATION SHIELD, AND OUTER JACKET, TRIPLEXED FOR THREE-CONDUCTOR CONFIGURATION CONDUCTOR MATERIAL COATED, ANNEALED COPPER, CLASS B STRANDED PER ASTM B-8 TEMP. 90 C INSULATION PRIMARY ETHYLENE-PROPYLENE RUBBER JACKET HYPALON CABLE SIZE AND LENGTH IN THREE (TRIPLEXED)-CONDUCTOR (FEET) 750 KCMIL 5300 LF NO. 4/0 AWG 1800 LF NO. 2/0 AWG 10600 LF
246.2122	8 KV CABLE	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION						
246.2123	5 KV CABLE	<p>VOLTAGE 5 KV</p> <p>TYPE SINGLE CONDUCTOR WITH STRAND SHIELD, PRIMARY INSULATION SHIELD, AND OUTER JACKET, TRIPLEXED FOR THREE-CONDUCTOR CONFIGURATION AND QUALIFIED AS CLASS 1E</p> <p>CONDUCTOR MATERIAL COATED, ANNEALED COPPER, CLASS B STRANDED PER ASTM B-8 TEMP. 90 C</p> <p>INSULATION PRIMARY ETHYLENE-PROPYLENE RUBBER JACKET HYPALON</p> <p>CABLE SIZE AND LENGTH IN THREE (TRIPLEXED) CONDUCTOR FEET:</p> <table border="0"> <tr> <td>750 KCMIL</td> <td>8300 LF</td> </tr> <tr> <td>350 KCMIL</td> <td>3200 LF</td> </tr> <tr> <td>NO. 4/0</td> <td>11100 LF</td> </tr> </table>	750 KCMIL	8300 LF	350 KCMIL	3200 LF	NO. 4/0	11100 LF
750 KCMIL	8300 LF							
350 KCMIL	3200 LF							
NO. 4/0	11100 LF							
246.22	LOW VOLTAGE BUS+CABLE							
246.221	BUS DUCT							
246.222	CABLE							

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION														
246.2221	LOW VOLTAGE POWER CABLE	<p>VOLTAGE 600V</p> <p>TYPE SINGLE CONDUCTOR WITH PRIMARY INSULATION AND OUTER JACKET, TRIPLEXED FOR THREE-CONDUCTOR CONFIGURATION AND QUALIFIED AS CLASS 1E</p> <p>CONDUCTOR</p> <p>MATERIAL COATED, ANNEALED COPPER, CLASS B STRANDED PER ASTM B-8</p> <p>TEMP. 90 C</p> <p>INSULATION</p> <p>PRIMARY ETHYLENE-PROPYLENE RUBBER</p> <p>JACKET HYPALON</p> <p>CABLE SIZE AND LENGTH IN THREE (TRIPLEXED)-CONDUCTOR (FEET)</p> <table border="1"> <tbody> <tr> <td>500 KCMIL</td> <td>9000 LF</td> </tr> <tr> <td>250 KCMIL</td> <td>10750 LF</td> </tr> <tr> <td>NO. 2/0 AWG</td> <td>3500 LF</td> </tr> <tr> <td>NO. 2 AWG</td> <td>9000 LF</td> </tr> <tr> <td>NO. 4 AWG</td> <td>58000 LF</td> </tr> <tr> <td>NO. 8 AWG</td> <td>247000 LF</td> </tr> <tr> <td>NO. 12 AWG</td> <td>140000 LF</td> </tr> </tbody> </table>	500 KCMIL	9000 LF	250 KCMIL	10750 LF	NO. 2/0 AWG	3500 LF	NO. 2 AWG	9000 LF	NO. 4 AWG	58000 LF	NO. 8 AWG	247000 LF	NO. 12 AWG	140000 LF
500 KCMIL	9000 LF															
250 KCMIL	10750 LF															
NO. 2/0 AWG	3500 LF															
NO. 2 AWG	9000 LF															
NO. 4 AWG	58000 LF															
NO. 8 AWG	247000 LF															
NO. 12 AWG	140000 LF															
246.3	CONTROL CABLE	<p>TYPE -INDIVIDUALLY INSULATED CONDUCTORS CABLED TOGETHER WITH FILLERS AND BINDER, AN OVERALL TAPE SHIELD AND AN OVERALL JACKET AND QUALIFIED AS CLASS 1E</p> <p>CONDUCTOR</p> <p>MATERIAL COATED, ANNEALED COPPER, CLASS C STRANDED PER ASTM B-8</p> <p>TEMP. 90 C</p> <p>INSULATION</p> <p>PRIMARY ETHYLENE-PROPYLENE RUBBER</p> <p>JACKET HYPALON</p> <p>CABLE SIZE: NO. 12 AWG</p> <p>CABLE LENGTH IN S/C FEET - 2.1 E06 FT</p>														
246.4	INSTRUMENT WIRE	<p>LENGTH IN FEET - 1.9 E06 FT</p>														

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT
NUMBER

ITEM

DESCRIPTION

246.5 CONTAINMENT PENETRATIONS

CLASS 1E CONTAINMENT PENETRATIONS :
QUANTITIES

MEDIUM VOLTAGE (15KV)	5
LOW VOLTAGE POWER (600V)	17
LOW VOLTAGE CONTROL	8
INSTRUMENTATION	12
SPECIAL INSTRUMENTATION	4
BLANK SPARES	15

25 . MISCELLANEOUS PLANT EQUIPT

251. TRANSPORTATION & LIFT EQPT

251.1 CRANES & HOISTS

251.11 TURBINE BUILDING CRANE

251.111 TG OVERHEAD TRAVELING CRAN

QUANTITY - 1
TYPE - OVERHEAD TRAVELING BRIDGE
CAPACITY:

MAIN HOIST - 210 TONS
AUX. HOIST - 30 TONS
BRIDGE SPAN - 128 FT (RAIL TO RAIL)

HOOK TRAVEL:
MAIN HOIST - 95 FT
AUX. HOIST - 102 FT

MAX. SPEEDS:
BRIDGE - 50 FPM
TROLLEY - 30 FPM
MAIN HOIST - 4.5 FPM
AUX. HOIST - 23 FPM

EQUIPMENT LIST - REPORT 1

5/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
251.112	HEATER BAY CRANE	<p>QUANTITY - 1</p> <p>TYPE - OVERHEAD TRAVELING BRIDGE</p> <p>CAPACITY:</p> <p>MAIN HOIST - 100 TONS</p> <p>AUX. HOIST - 15 TONS</p> <p>BRIDGE SPAN - 61 FT (RAIL TO RAIL)</p> <p>HOOK TRAVEL:</p> <p>MAIN HOIST - 63 FT</p> <p>AUX. HOIST - 64 FT</p> <p>MAX. SPEEDS:</p> <p>BRIDGE - 50 FPM</p> <p>TROLLEY - 50 FPM</p> <p>MAIN HOIST - 5 FPM</p> <p>AUX. HOIST - 15 FPM</p>
251.12	REACTOR CONTNMT BLDG CRANE	<p>QUANTITY - 1</p> <p>TYPE - OVERHEAD POLAR GANTRY</p> <p>CAPACITY:</p> <p>MAIN HOIST - 420 TONS</p> <p>AUX. HOIST - 50 TONS</p> <p>BRIDGE SPAN - 103 FT</p> <p>HOOK TRAVEL:</p> <p>MAIN HOIST - 130 FT</p> <p>AUX. HOIST - 150 FT</p> <p>MAX. SPEEDS:</p> <p>BRIDGE - 50 FPM</p> <p>TROLLEY - 30 FPM</p> <p>MAIN HOIST - 3.5 FPM</p> <p>AUX. HOIST - 30 FPM</p> <p>INCHING DRIVES ON BRIDGE, TROLLEY, AND MAIN HOIST</p> <p>FULLY REDUNDANT MAIN HOIST QUALIFIED TO RETAIN LOAD DURING SSE</p>
251.13	REACTOR SERVICE BLDG. CRANE	NONE
251.14	INTAKE STRUCTURE CRANE	NONE
251.15	CIRC WATER PUMPHOUSE CRANE	NONE
251.16	MISC. CRANES, HOISTS, MONORLS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
251.161	10 TON CRANES	QUANTITY - 1 TYPE - MONORAIL CAPACITY - 10 TONS LIFT - 30 FT INDUSTRY STANDARD SPEEDS, SINGLE SPEED PENDANT CONTROL
251.162	5 TON CRANES	QUANTITY - 9 TYPE - MONORAIL CAPACITY - 5 TONS LIFT - 30 FT INDUSTRY STANDARD SPEEDS, SINGLE SPEED PENDANT CONTROL
251.17	DIESEL BUILDING CRANES	QUANTITY - 2 TYPE - OVERHEAD TRAVELING BRIDGE CAPACITY - 5 TONS SPAN - 24 FT
252.	AIR, WATER + STEAM SERVICE SY	
252.1	AIR SYSTEMS	
252.11	COMPRESSED AIR SYSTEM	
252.111	ROTATING MACHINERY	
252.1111	AIR COMPRESSORS + MOTORS	
252.11111	AIR COMPRESSORS	QUANTITY - 3 X 50 PCT TYPE - RECIPROCATING, OIL-FREE ORIENTATION - VERTICAL CAPACITY - 350 CFM @ 100 PSIG SPEED - 450 RPM COOLING FLOW - 7.5 GPM @ 20 F RISE INTAKE FILTER - DRY TYPE AFTER COOLER: TYPE - SHELL AND TUBE SURF. AREA - 33.4 SQ FT COOLING FLOW - 12.4 GPM @ 20 F RISE DESIGN PRES - 150 PSIG DESIGN TEMP - SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.11112	AIR COMPRESSOR MOTOR	QUANTITY - 3 TYPE - HORSEPOWER - 100 HP SPEED - 1750 RPM VOLTAGE - 460 V, 3 PHASE, 60 HZ FRAME - 404 T
252.113	TANKS AND PRESSURE VESSELS	
252.1131	AIR RECEIVERS	QUANTITY - 2 ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 96 CU FT DESIGN PRESS - 135 PSIG DESIGN TEMP - MATERIAL - C.S. SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME VIII
252.1132	AIR DRYERS	QUANTITY - 2 TYPE - REGENERANT DESSICANT FLOW RATE - 700 CFM AIR PRESS - 100 PSIG DES. PRESS - 135 PSIG DES. TEMP. - TEMP. IN/OUT - 105 F / -40 F DEWPOINT COOLING FLOW - 15 GPM @ 95 F SAFETY CLASS - NNS SEISMIC CAT. - NONE
252.115	PIPING	
252.1151	2IN + SMALLER	
252.11511	CS/NNS	
252.1152	2.5IN + LARGER	
252.11521	CS/NNS	
252.116	VALVES	
252.1161	GATE	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM
252.1162	CHECK
252.1163	GLOBE
252.1165	RELIEF
252.117	PIPING - MISC ITEMS
252.1171	HANGERS + SUPPORTS
252.1172	INSULATION
252.1173	SPECIALTIES
252.118	INSTRUMENTATION+CONTROL

QUANTITY -	
TRANSMITTER -	4
LOCAL INDICATOR -	39
BOARD MOUNTED INDICATOR -	2
TEMP TRANSMITTER -	6
PROCESS SWITCH -	26
ANNUNCIATOR -	24
MISC. -	4

252.12	CONTAIN BLDG INST AIR SYS
252.121	ROTATING MACHINERY

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.1211	CONT INSTR AIR COMPRES PKG	QUANTITY - 2 X 100 PCT TYPE - RECIPROCATING, OIL-FREE ORIENTATION - VERTICAL CAPACITY - 55 CFM @ 100 PSIG SPEED - 550 RPM COOLING FLOW - 3.3 GPM INTAKE FILTER - AIR MAZE, MODEL DA AFTERCOOLER / MOISTURE SEPARATOR: TYPE - SURF. AREA - 4.2 SQ FT DESIGN PRES - 150 PSIG DESIGN TEMP - RECEIVER: VOLUME - 19 CU FT DIMENSIONS - 24 IN. DIA X 72 IN. LONG MOTOR: TYPE - HORSEPOWER - 20 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ SAFETY CLASS - 3 SEISMIC CAT. - I
252.123	TANKS+PRESSURE VESSELS	
252.1231	CONT INSTR AIR DRYER PKG	QUANTITY - 2 X 100 PCT TYPE - REGENERANT DESSICANT UNIT COMPLETE WITH PREFILTERS AND AFTERFILTERS, HERMETICALLY SEALED FLOW RATE - 50 CFM AIR PRESS - 100 PSIG INLET TEMP - 105 F OUTLET TEMP - -35 F DEWPOINT SAFETY CLASS - 3 SEISMIC CAT. - I
252.125	PIPING	
252.1251	2 IN + SMALLER	
252.12511	CS/NNS	
252.1252	2.5 IN + LARGER	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.12521	CS/NNS	
252.126	VALVES	
252.127	PIPING-MISC ITEMS	
252.1271	HANGERS AND SUPPORTS	
252.1272	INSULATION	
252.1273	SPECIALTIES	
252.2	WATER SYSTEMS	
252.21	SERVICE WATER SYSTEM	
252.211	ROTATING MACHINERY	
252.2111	SERVICE WATER PUMP & MOTOR	
252.21111	SERVICE WATER PUMP	QUANTITY - 3 X 50 PCT. TYPE - MIXED FLOW ORIENTATION - VERTICAL FLOW RATE - 11000 GPM SPEED - 880 RPM TDH - 130 FT BHP - 435 HP NPSH - 20 FT EFFICIENCY - 84 PCT. DESIGN PRESS - 100 PSI DESIGN TEMP. - 100 F MATERIAL - NI-RESIST COLUMN AND BOWL, S.S. IMPELLER SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
252.21112	SERVICE WATER PUMP MOTOR	TYPE - HORSEPOWER - 500 HP SPEED - VOLTAGE - 4 KV, 3 PHASE, 60 HZ
252.215	PIPING	
252.2151	2IN & SMALLER	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.21511	CS/NNS	
252.2152	2.5 IN & LARGER	
252.21521	CS/NNS	
252.216	VALVES	
252.2161	GATE	
252.2162	CHECK	
252.2163	GLOBE	
252.2166	BUTTERFLY	
252.217	PIPING-MISC ITFMS	
252.2171	HANGERS AND SUPPORTS	
252.2172	INSULATION	
252.2173	SPECIALTIES	
252.2174	PIPE TRENCHING	INCLUDED WITH STRUCTURE ASSOCIATED YARDWORK
252.218	INSTRUMENTATION & CONTROL	INCLUDED WITH 256.718
252.22	YARD FIRE PROTECTION	
252.221	ROTATING MACHINERY	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.2211	DIESEL ENGINE FIRE PUMPS	QUANTITY - 2 X100 PCT. TYPE - ORIENTATION - HORIZONTAL FLOW RATE - 2500 GPM SPEED - 1750 RPM TDH - 125 PSI BHP - 245 HP NPSH - EFFICIENCY - 74 PCT. DESIGN PRESS - 200 PSIG DESIGN TEMP - 100 F MATERIAL - C.S. SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - NATIONAL FIRE PROTECTION ASSOCIATION COMPLETE WITH ALL ACCESSORIES AND CONTROLS
252.2212	MOTOR DRIVEN FIRE PUMPS	
252.22121	FIRE PUMP	QUANTITY - 2 X100 PCT. TYPE - ORIENTATION - HORIZONTAL FLOW RATE - 2500 GPM SPEED - 1770 RPM TDH - 125 PSI BHP - 245 HP NPSH - EFFICIENCY - 74 PCT. DESIGN PRESS - 200 PSIG DESIGN TEMP - 100 F MATERIAL - C.S. SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - NATIONAL FIRE PROTECTION ASSOCIATION COMPLETE WITH ALL ACCESSORIES AND CONTROLS
252.22122	FIRE PUMP MOTOR	TYPE - TENV HORSEPOWER - 250 HP SPEED - 1770 RPM VOLTAGE - 4 KV, 3 PHASE, 60 HZ

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.2213	JOCKEY PUMP + MOTOR	
252.22131	JOCKEY PUMP	QUANTITY - 1 X100 PCT. TYPE - CENTRIFUGAL ORIENTATION - HORIZONTAL FLOW RATE - 50 GPM SPEED - 1770 RPM TDH - 125 PSI BHP - 8.1 HP NPSH - EFFICIENCY - 45 PCT. DESIGN PRESS - 200 PSIG DESIGN TEMP - 100 F MATERIAL - C.S. SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - NATIONAL FIRE PROTECTION ASSOCIATION
252.22132	JOCKEY PUMP MOTOR	TYPE - HORSEPOWER - 10 HP SPEED - 1770 RPM VOLTAGE - 460V, 3 PHASE, 60 HZ
252.2214	HOT WATER CIRC PUMP+MOTOR	
252.22141	HOT WATER CIRC PUMP	QUANTITY - 2 X100 PCT. TYPE - CENTRIFUGAL ORIENTATION - HORIZONTAL FLOW RATE - 75 GPM SPEED - TDH - 70 FT BHP - NPSH - EFFICIENCY - DESIGN PRESS - 50 PSIG DESIGN TEMP - 250 F MATERIAL - C.S. SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.22142	HOT WATER CIRC PUMP MOTOR	TYPE - HORSEPOWER - 5 HP SPEED - VOLTAGE - 460V, 3 PHASE, 60 HZ
252.222	HEAT TRANSFER EQUIPMENT	
252.2221	HOT WATER HEAT EXCHANGER	QUANTITY - 2 X100 PCT. TYPE - SHELL AND TUBE ORIENTATION - HORIZONTAL HEAT LOAD - 1.10E+06 BTU/HR SURFACE AREA - SHELL CONDITION: DES.PRES/TEMP- 50 PSIG/250 F TEMP IN/OUT - 180 F/210 F FLOW RATE - 75 GPM MATERIAL - C.S. TUBE CONDITION: QUANTITY - SIZE - DES.PRES/TEMP- 75 PSIG/250 F TEMP IN/OUT - FLOW RATE - 1200 LB/HR @ 50 PSIG MATERIAL - C.S. SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - ASME SECTION VIII
252.223	TANKS AND PRESSURE VESSELS	
252.2231	FIRE WATER STORAGE TANKS	QUANTITY 2 X100 PCT. ORIENTATION VERTICAL DIMENSIONS 38FT DIA X 38FT ST.SIDE VOLUME 300,000 GAL DESIGN PRESS ATMOSPHERIC DESIGN TEMP 100 F MATERIAL C.S. SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE NATIONAL FIRE PROT ASOC
252.225	PIPING	
252.2251	2IN + SMALLER	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.22511	CS/NNS	
252.2252	2.5 IN + LARGER	
252.22521	CS/NNS	
252.22522	CS/NNS	
252.22523	CS/NNS	
252.226	VALVES	
252.2261	STANDARD VALVES	
252.22611	GATE	
252.22612	GLOBE	
252.22613	CHECK	
252.22615	RELIEF	
252.2262	E-RATED VALVES	
252.22621	GATE	
252.22622	CHECK	
252.22623	GLOBE	
252.22624	DIAPHRAGM	
252.22625	RELIEF	
252.22629	SPECIAL VALVES	
252.226291	POST INDICATOR GATE	
252.226292	DELUGE	
252.227	PIPING - MISC ITEMS	
252.2271	HANGERS + SUPPORTS	
252.2272	INSULATION	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION	QUANTITY
252.2273	SPECIALTIES		
252.22731	HOSE HOUSES		
252.22732	FIRE HYDRANTS		
252.228	INSTRUMENTATION+CONTROL		
		LOCAL INDICATOR -	18
		BOARD MOUNTED INDICATOR -	6
		PROCESS SWITCH -	6
		CONTROLLERS -	4
252.24	POTABLE WATER SYSTEM		
252.245	PIPING		
252.2451	2IN + SMALLER		
252.24511	GALV/NNS		
252.24512	CU/NNS		
252.2452	2.5IN + LARGER		
252.24521	GALV/NNS		
252.246	VALVES		
252.2461	GATE		
252.2462	CHECK		
252.2463	GLOBE		
252.2465	SAFETY/RELIEF		
252.2469	SPECIAL VALVES		
252.24691	SAFETY SHOWER		
252.24692	EYE WASH		
252.24693	HOSE BIBBS		

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.247	PIPING-MISC ITEMS	
252.2471	HANGERS + SUPPORTS	
252.2472	INSULATION	
252.2473	SPECIALTIES	
252.248	INSTRUMENTATION + CONTROL	ALLOWANCE
252.3	AUXILIARY STEAM SYSTEM	
252.31	AUXILIARY BOILER SYSTEM	
252.312	HEAT TRANSFER EQUIPMENT	
252.3121	AUXILIARY BOILERS	QUANTITY - 2 X 100 PCT. TYPE - PRESSURIZED FURN., W.T. DRUM SIZE: UPPER - 42 IN O.D. LOWER - 24 IN O.D. RATING - 80,000 LB/HR @ 150 PSIG (SAT.) HEAT RELEASE - 125,000 BTU/HR/CU FT HEAT ABSORP. - 195,000 BTU/HR/SQ FT FURN. SURF. - 823 SQ FT HEATING SURF. - 5,120 SQ FT DES. PRESS - 250 PSIG DES. TEMP. - BURNER TYPE - AIR/STEAM ATOMIZING IGNITOR TYPE - ELEC. ARC
252.315	PIPING	
252.3151	2IN + SMALLER	
252.31511	CS/WNS	
252.3152	2.5IN + LARGER	
252.31521	CS/WNS	
252.316	VALVES	
252.3161	GATE	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.3162	CHECK	
252.3163	GLOBE	
252.317	PIPING - MISC ITEMS	
252.3171	HANGERS + SUPPORTS	
252.3172	INSULATION	
252.3173	SPECIALTIES	
252.32	AUX BOILER FEEDWATER SYS	
252.321	ROTATING MACHINERY	
252.3211	AUX FW PUMPS+ MOTORS	
252.32111	AUX FW PUMPS	<p>QUANTITY - 3</p> <p>TYPE - CENTRIFUGAL</p> <p>ORIENTATION - HORIZONTAL</p> <p>FLOW RATE - 180 GPM</p> <p>SPEED - 3550 RPM</p> <p>TDH - 560 FT</p> <p>BHP 44.6 HP</p> <p>NPSH - 11 FT</p> <p>EFFICIENCY - 57 PCT.</p> <p>DESIGN PRESS - 300 PSIG</p> <p>DESIGN TEMP - 100 F</p> <p>MATERIAL - IMP. CHROME STEEL</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT. - NONE</p> <p>DESIGN CODE -</p>
252.32112	AUX FW MOTORS	<p>TYPE - TENV</p> <p>HORSEPOWER - 60 HP</p> <p>SPEED - 3550 RPM</p> <p>VOLTAGE - 460V, 3 PHASE, 60 HZ</p>
252.325	PIPING	
252.3251	2 IN + SMALLER	
252.32511	CS/NNS	

EQUIPMENT LIST - REPORT 1

29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.3252	2.5 IN + LARGER	
252.32521	CS/NNS	
252.326	VALVES	
252.3261	GATE	
252.3262	CHECK	
252.3263	GLOBE	
252.327	PIPING - MISC. ITEMS	
252.3271	HANGERS + SUPPORTS	
252.3272	INSULATION	
252.3273	SPECIALTIES	
252.33	AUX FUEL OIL SYSTEM	
252.331	ROTATING MACHINERY	
252.3311	FUEL OIL PUMPS + MOTORS	
252.33111	FUEL OIL PUMP	QUANTITY - 3 X 50 PCT. TYPE - POS. DISPL. ORIENTATION - HORIZONTAL FLOW RATE - 12 GPM SPEED - 3600 RPM TDH - 125 PSIG BHP - NPSH - EFFICIENCY - DESIGN PRESS - 200 PSIG DESIGN TEMP - 300 F MATERIAL - C.S. SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.33112	FUEL OIL PUMP MOTOR	TYPE - HORSEPOWER - 3 HP SPEED - 3600 RPM VOLTAGE - 460V, 3 PHASE, 60 HZ
252.335	PIPING	
252.3351	2IN + SMALLER	
252.33511	CS/NNS	
252.3352	2.5IN + LARGER	
252.33521	CS/NNS	
252.336	VALVES	
252.3361	GATE	
252.3362	CHECK	
252.3363	GLOBE	
252.337	PIPING - MISC ITEMS	
252.3371	HANGERS + SUPPORTS	
252.3372	INSULATION	NONE
252.3373	SPECIALTIES	
252.34	AUX DEAR + MAKEUP SYSTEM	
252.341	ROTATING MACHINERY	
252.3411	TRANSFER PUMP + MOTOR	

EQUIPMENT LIST - REPORT 1

29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.34111	TRANSFER PUMP	QUANTITY - 2 X 50 PCT. TYPE - CENTRIFUGAL ORIENTATION - HORIZONTAL FLOW RATE - 90 GPM SPEED - 1750 RPM TDH - 135 FT BHP - 6.8 HP NPSH - 10 FT EFFICIENCY - 45 PCT DESIGN PRESS - 100 PSIG DESIGN TEMP - 200 F MATERIAL - S.S. SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
252.34112	TRANSFER PUMP MOTOR	TYPE - TENV HORSEPOWER - 10 HP SPEED - 1750 RPM VOLTAGE - 460V, 3 PHASE, 60 HZ
252.343	TANKS AND PRESSURE VESSELS	
252.3431	DEAERATOR	QUANTITY - 1 TYPE - TRAY CAPACITY - 170,000 LB/HR STG. TANK CAP'Y - 143 CU FT OPER. PRESS - 5 PSIG DES. PRESS - 30 PSIG STM. INLET TEMP - 307 F WATER INLET TEMP - 65 F (MIN.) FINAL WATER TEMP - 228 F
252.345	PIPING	
252.3451	2 IN + SMALLER	
252.3452	2.5 IN + LARGER	
252.34521	CS/NNS	
252.346	VALVES	
252.3461	GATE	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.3462	CHECK	
252.3463	GLOBE	
252.347	PIPING - MISC. ITEMS	
252.3471	HANGERS + SUPPORTS	
252.3472	INSULATION	NONE
252.3473	SPECIALTIES	
252.35	AUX CHEM FEED SYSTEM	
252.351	ROTATING MACHINERY	
252.3511	CHEM FEED PUMPS + MOTORS	
252.35111	CHEM FEED PUMP	QUANTITY - 4 TYPE - POSITIVE DISPLACEMENT ORIENTATION - HORIZONTAL FLOW RATE - 5 GPH SPEED - 1750 RPM TDH - 250 PSIG BHP - NPSH - 3 FT EFFICIENCY - DESIGN PRESS - 300 PSIG DESIGN TEMP - 300 PSIG MATERIAL - C.S. CASING, 316 SS WETTED PARTS SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE -
252.35112	CHEM FEED PUMP MOTOR	TYPE - TENV HORSEPOWER - 3/4 HP SPEED - 1750 RPM VOLTAGE - 460V, 3 PHASE, 60 HZ
252.353	TANKS AND PRESSURE VESSELS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.3531	CHEM FEED TANKS	QUANTITY - 2 ORIENTATION - VERTICAL DIMENSIONS - VOLUME - 250 GAL DESIGN PRESS - ATMOS DESIGN TEMP. - 90 F MATERIAL - 304 SS SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - AGITATOR: MATERIAL - 316 SS SHAFT AND PROP. MOTOR HP - 1/8 HP
252.355	PIPING	
252.3551	2 IN + SMALLER	
252.35511	SS/NNS	
252.3552	2.5 IN + LARGER	
252.356	VALVES	
252.3561	GATE	
252.3562	CHECK	
252.3563	GLOBE	
252.3569	SPECIAL VALVES	
252.35691	NEEDLE	
252.357	PIPING - MISC ITEMS	
252.3571	HANGERS + SUPPORTS	
252.3572	INSULATION	NONE
252.3573	SPECIALTIES	
252.36	AUX. STEAM + CONDENSATE RETRN	
252.361	ROTATING MACHINERY	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.3611	AUX CONDENSATE PUMP+MOTOR	
252.36111	AUX CONDENSATE PUMP	QUANTITY - 2 TYPE - CENTRIFUGAL ORIENTATION - HORIZONTAL FLOW RATE - 180 GPM SPEED - 1800 RPM TDH - 150 FT BHP - 11 HP NPSH - EFFICIENCY - 60 PCT. DESIGN PRESS - 150 PSIG DESIGN TEMP - 150 F MATERIAL - CAST IRON CASING, CHROME STEEL IMPELLER SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
252.36112	AUX CONDENSATE PUMP MOTOR	TYPE - HORSEPOWER - 15 HP SPEED - 1800 RPM VOLTAGE - 460V, 3 PHASE, 60 HZ
252.363	TANKS AND PRESSURE VESSELS	
252.3631	CONDENSATE RECEIVER	QUANTITY - 1 ORIENTATION - VERTICAL DIMENSIONS - 5FT DIA X 5FT STR. SIDE VOLUME - 700 GAL DESIGN PRESS - 15 PSIG DESIGN TEMP. - 250 F MATERIAL - CS SAFETY CLASS - SEISMIC CAT. - DESIGN CODE -
252.365	PIPING	
252.3651	2 IN + SMALLER	
252.36511	CS/NNS	
252.3652	2.5 IN + LARGER	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN H3 AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.36521	CS/NNS	
252.366	VALVES	
252.3661	GATE	
252.3662	CHECK	
252.3663	GLOBE	
252.367	PIPING - MISC. ITEMS	
252.3671	HANGERS + SUPPORTS	
252.3672	INSULATION	
252.3673	SPECIALTIES	
252.37	AUX BOILER STACKS + DUCT	INCLUDED WITH ACCDUNT NO. 2523121
252.38	AUX BOILER BLOWDOWN	
252.383	TANKS AND PRESSURE VESSELS	
252.3831	AUX BOILER BLOWDOWN TANK	QUANTITY - 1 ORIENTATION - VERTICAL DIMENSIONS - 4 FT(DIA)X4 FT STR SIDE VOLUME 375 GAL DESIGN PRESS - 250 PSIG DESIGN TEMP - 200 F MATERIAL - C.S. SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -
252.385	PIPING	
252.3851	2 IN + SMALLER	
252.38511	CS/NNS	
252.3852	2.5 IN + LARGER	
252.386	VALVES	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.3861	GATE	
252.3862	CHECK	
252.3869	SPECIAL VALVES	
252.38691	BLOWDOWN	
252.387	PIPING - MISC ITEMS	
252.3871	HANGERS + SUPPORTS	
252.3872	INSULATION	
252.3873	SPECIALTIES	
252.39	AUX STEAM SYS COMPLETE I+C	ALLOWANCE
252.4	PLANT FUEL OIL SYSTEM	
252.43	TANKS AND PRESSURE VESSELS	
252.431	PLANT FUEL OIL STORAGE TK	QUANTITY - 1 ORIENTATION - VERTICAL DIMENSIONS - 42 FT DIA. X 27 FT VOLUME - 270,000 GAL DESIGN PRESS - ATMOS. DESIGN TEMP. - 100 F MATERIAL - C.S. SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE - API 650
252.49	FOUNDATIONS/SKIDS	
252.491	PLANT FUEL OIL STG TK FNDT	
252.4911	EXCAVATION WORK	
252.49111	EARTH EXCAVATION	
252.49112	BACKFILL	
252.4912	CONCRETE WORK	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
252.49121	FORMWORK	
252.49122	REINFORCING STEEL	
252.49123	CONCRETE	
252.4913	COMPACTED SAND BED	
252.4914	DIKE	
253.	COMMUNICATIONS EQUIPMENT	
253.1	LOCAL COMMUNICATIONS SYS	
253.11	GEN. PURPOSE TELEPHONE SYS	A COMPLETE DIAL AUTOMATIC TELEPHONE SYSTEM CONSISTING OF AN AUTOMATIC SWITCHBOARD AND DIAL TELEPHONES IS PROVIDED
253.12	SOUND POW TELEPHONE SYS	PORTABLE SOUND POWERED PHONE HAND-SETS AND JACKS LOCATED THROUGHOUT THE PLANT ARE PROVIDED
253.15	PA + INTERCOM SYS.	A PA SYSTEM IS PROVIDED COMPRISED OF HANDSETS, AMPLIFIERS AND LOUDSPEAKERS
253.2	SIGNAL SYSTEMS	
253.21	FIRE DETECTION SYSTEM	ALLOWANCE
253.211		
253.212		
253.22	SECURITY SYSTEM	ALLOWANCE
254.	FURNISHINGS + FIXTURES	
254.1	SAFETY EQUIPMENT	
254.11	PORTABLE FIRE EXTINGUISHRS	ALLOWANCE
254.2	CHEMICAL LAB + INSTR SHOP	
254.223	INSTRUMENT SHOP APPARATUS	ALLOWANCE

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
254.23	SPEC LAB FURNITURE+FIXTURE	ALLOWANCE
254.3	OFFICE EQUIP+FURNISHINGS	
254.31	OFFICE FURNITURE	
254.4	CHANGE ROOM EQUIPMENT	
254.41	LOCKERS+BENCHES	ALLOWANCE
254.5	ENVIRONMENT MONIT EQUIP	
254.51	OFF SITE RADIOLOGICAL MONT	<p>QUANTITY:</p> <p>SITE SURVEILLANCE MONITORS INCLUDING IONIZATION CHAMBER DETECTORS, ELECTROMETER READOUT, BATTERY PACK, MAGNETIC TAPE RECORDER - 5 COMPUTER BASED ISOTOPIC IDENTIFICA- TION EQUIPMENT CONSISTING OF GE(LI) DETECTOR, RELATED PANELS - 1 RADIOLOGICAL MANAGEMENT PROGRAM - 1</p>
254.52	METEOROLOGICAL MONIT.EQUIP	<p>QUANTITY:</p> <p>MET TOWER - 1 EXCLUSION FENCE - 1 WIND SPEED AND DIR. SENSORS - 2 TEMP. AND DEW POINT SENSORS - 2 BAROMETRIC PRESS SENSORS - 2 RAIN GAGES - 2 RELATIVE HUMIDITY SENSORS - 2 SIGNAL TRANSMITTERS - 1 STRIP CHART RECORDERS - 2</p>
254.53	WATER QUALITY MONITORING	WATER QUALITY ANALYZER EQUIPMENT
254.54	THERMAL EFFLUENT MONITOR	TEMPERATURE DETECTORS
254.55	SEISMIC MONITORING	<p>QUANTITY:</p> <p>STRONG MOTION SEISMIC SENSING AND RECORDING - 1 MAGNETIC TAPE PLAYBACK RECORDER - 1 BATTERY SET - 1</p>
254.6	DINING FACILITIES	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
254.61	CAFETERIA EQUIPMENT	ALLOWANCE
26 .	MAIN COND HEAT REJECT SYS	
261.	STRUCTURE:	
261.1	MAKEUP WTF INT + DISCH STR	SEE COST ESTIMATE FOR STRUCT QUANTITIES
261.11	INTAKE STRUCTURE	
261.111	EXCAVATION WORK	
261.1111	EARTH EXCAVATION	
261.1112	ROCK EXCAVATION	
261.1113	SHEETING (TEMP COFFERDAM)	
261.1114	STRUCT STL (TEMP COFFERDAM)	
261.1115	PUMPING	
261.112	BEARING PILES (STEEL)	
261.113	SUBSTRUCTURE CONCRETE	
261.1131	FORMWORK	
261.1132	REINFORCING STEEL	
261.1133	CONCRETE	
261.1134	EMBEDDED STEEL	
261.1135	CONCRETE FINISH	
261.1136	WATERPROOFING	
261.1137	CONSTRUCTION JOINTS	
261.1138	RUBBING CONCRETE SURFACES	
261.114	SUPERSTRUCTURE	
261.1141	CONCRETE WORK	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN-USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
261.1142	STRUCTURAL + MISC. STEEL	
261.11421	STRUCTURAL STEEL	
261.11422	,GRATING (GALV)	
261.11423	HANDRAIL	
261.1143	EXTERIOR WALLS	
261.11431	CONCRETE	
261.11432	MASONRY	
261.1144	ROOF DECK	
261.11441	METAL ROOF DECK	
261.1145	ROOFING + FLASHING	
261.11451	B.U. ROOFG, INSULTN, + FLA	
261.1146	INTERIOR WALLS	
261.11461	CONCRETE WALLS	
261.11462	MASONRY WALLS	
261.11463	PARTITIONS	
261.1147	DOORS + WINDOWS	
261.11471	ROLLING STEEL DOORS	
261.11472	PERSONNEL DOORS	
261.11473	SASH + GLAZING	
261.1149	PAINTING	
261.11491	CONCRETE	
261.11492	STEELWORK	
261.11493	METAL DECK	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
261.11494	HANDRAIL	
261.117	BULKHEAD	
261.1171	STEEL SHEEFING	
261.1172	STRUCTLRAL STEEL	
261.1173	GRAVEL FIL.	
261.1174	DREDGING	
261.1175	RIP-RAP (12 IN. THICK)	
261.1176	CHAIN LINK FENCE(7FT HIGH)	
261.118	PROTECTIVE DOLPHINS	
261.1181	WOOD PILES	
261.119	BUILDING SERVICES	
261.1191	FLOOR DRAINS + PIPING	
261.1192	HEATING + VENTILATING	
261.11921	AXIAL WALL FANS	
261.11922	ELECTRIC UNIT HEATERS	
261.11928	INSTRUMENTATION + CONTROL	ALLOWANCE
261.12	DISCHARGE STRUCTURE	
261.121	EXCAVATION WORK	
261.1211	EARTH EXCAVATION	
261.1212	BACKFILL	
261.1213	DREDGING	
261.122	BEARING PILES (STEEL)	
261.127	RIP-RAP (12 IN. THICK)	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
261.128	MARKER PILES (WOOD)	
261.2	CIRC WATER PUMP HOUSE	SEE COST ESTIMATE FOR STRUCT QUANTITIES
261.21	BUILDING STRUCTURE	
261.211	EXCAVATION WORK	
261.2111	EARTH EXCAVATION	
261.2112	ROCK EXCAVATION	
261.2113	CONCRETE FILL	
261.2114	BACKFILL	
261.2115	PUMPING	
261.213	SUBSTRUCTURE CONCRETE	
261.2131	FORMWORK	
261.2132	REINFORCING STEEL	
261.2133	CONCRETE	
261.2134	EMBEDDED STEEL	
261.2135	FLOOR FINISH	
261.2136	WATERPROOFING	
261.2137	CONSTRUCTION JOINTS	
261.2138	RUBBING CONCRETE SURFACES	
261.2139	WIRE FABRIC	
261.214	SUPERSTRUCTURE	
261.2141	CONCRETE WORK	
261.21411	FORMWORK	
261.214111	FORMWORK-WOOD	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
261.214112	FORMWORK-METAL	
261.21412	REINF. STEEL	
261.21413	CONCRETE	
261.21414	EMBEDDED STEEL	
261.21415	FLOOR FINISH	
261.21416	WATERPROOFING	
261.21417	RUBBING CONCRETE SURFACES	
261.21418	CONSTRUCTION JOINTS	
261.2142	STRUCT + MISC. STEEL	
261.21421	STRUCT. STEEL	
261.21423	MISC. FRAMES, ETC.	
261.21425	FLOOR GRATING (GALV.)	
261.21426	STAIR TREADS	
261.21427	HANDRAILS	
261.2143	EXTERIOR WALLS	
261.21431	CONCRETE WALLS	
261.21432	MASONRY WALLS	
261.2144	ROOF DECK	
261.21441	METAL ROOF DECK	
261.2145	ROOFING + FLASHING	
261.21451	B.U. ROOFING, FLASHING+INS	
261.2146	INTERIOR WALLS + PARTIT.	
261.21461	CONCRETE WALLS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
261.21463	PARTITIONS	
261.2147	DOORS + WINDOWS	
261.21472	PERSONNEL DOORS	
261.21473	SASH + GLAZING	
261.2149	PAINTING	
261.21491	CONCRETE	
261.21492	STEELWORK	
261.21493	METAL DECK	
261.21494	HANDRAIL	
261.22	BUILDING SERVICE	
261.221	PLUMBING + DRAINS	
261.2211	ROOF DRAINS & PIPING	
261.22111	DRAINS	QUANTITY - 8 SIZE - 6 IN
261.22115	PIPING (ALL 2.5 IN + LGR)	
261.221151	GALV STEEL/NNS	
261.2212	FLOOR DRAINS & PIPING	
261.22121	DRAINS	QUANTITY - 6 SIZE - 4 IN MATERIAL - PVC QUANTITY - 24 SIZE - 4 IN MATERIAL - STEEL
261.22125	PIPING (ALL 2.5 IN + LGR)	
261.221251	CI/NNS	
261.221252	PVC/NNS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
261.222	HEATING, VENT, + AIR COND	
261.2221	ROTATING MACHINERY	
261.22211	PROPELLER FAN + MOTOR	
261.222111	PROPELLER FAN	QUANTITY - 3 X 33 1/3 PCT TYPE - WITH GUARD AND AUTO OUTLET DAMPERS FLOW RATE - 1.22 EOS CFM S.P. - 0.5 IN SAFETY CLASS - NNS SEISMIC CAT - NONE DESIGN CODE -
261.222112	PROPELLER FAN MOTOR	TYPE - HORSEPOWER - 25 HP SPEED - VOLTAGE - 460 V, 3 PHASE, 60 HZ
261.2222	HEAT TRANSFER EQUIPMENT	
261.22221	ELECTRIC LNIT HEATERS+MTR	
261.222211	ELECTRIC LNIT HEATERS	QUANTITY - 4 HEAT ELEMENTS: NUMBER - POWER - 30 KW VOLTAGE - 460 V, 3 PHASE, 60 HZ FAN: FLOW - 2,200 CFM S.P. - SAFETY CLASS - SEISMIC CAT - DESIGN CODE -
261.222212	ELECTRIC UNIT HTR MOTORS	TYPE - HORSEPOWER - 0.25 HP SPEED - VOLTAGE - 115 V, 1 PH, 60 HZ
261.2226	VALVES + DAMPERS	
261.22269	SPECIAL VALVES + DAMPERS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
261.222691	INTAKE LOUVERS	QUANTITY - 3 TYPE - MANUAL OP INTAKE LOUVER FLOW - 1.2 EOS CFM SIZE - 44 FT W X 8 FT H MATERIAL - SAFETY CLASS - SEISMIC CAT -
261.224	LIGHTING & SERVICE POWER	
261.228	INSTRUMENTATION + CONTROL	ALLOWANCE
261.3	MAKEUP WTR PRETREATMNT BLG	SEE COST ESTIMATE FOR STRUCT QUANTITIES
261.31	BUILDING STRUCTURE	
261.311	EXCAVATION WORK	
261.3111	EARTH EXCAVATION	
261.3112	ROCK EXCAVATION	
261.3113	CONCRETE FILL	
261.3114	FILL + BACKFILL	
261.3115	DEWATERING	
261.313	SUBSTRUCTURE CONCRETE	
261.3131	FORMWORK	
261.3132	REINFORCING STEEL	
261.3133	CONCRETE	
261.3134	EMBEDDED STEEL	
261.3135	FLOOR FINISH	
261.3136	WATERPROOFING	
261.3137	CONSTRUCTION JOINTS	
261.3138	RUBBING CONCRETE SURFACES	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
261.314	SUPERSTRUCTURE	
261.3141	CONCRETE WORK	
261.31411	FORMWORK	
261.314111	FORMWORK-WOOD	
261.314112	FORMWORK-METAL	
261.31412	REINFORCING STEEL	
261.31413	CONCRETE	
261.31414	EMBEDDED STEEL	
261.31415	FLOOR FINISH	
261.31416	WATERPROOFING	
261.31417	RUBBING CONCRETE SURFACES	
261.31418	CONSTRUCTION JOINTS	
261.3142	STRUCTURAL * MISC STEEL	
261.31421	STRUCTURAL STEEL	
261.31423	MISCELLANEOUS FRAMES, ETC.	
261.31425	FLOOR GRATING (GALV.)	
261.31426	STAIR TREADS	
261.31427	HANDRAIL	
261.3143	EXTERIOR WALLS	
261.31431	CONCRETE WALLS	
261.31432	MASONRY WALLS	
261.31433	METAL INSULATED SIDING	
261.31434	WINDOW WALL	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
261.3144	ROOF DECK	
261.31441	METAL ROOF DECK	
261.31442	PRECAST CONCRETE PANELS	
261.31443	CONCRETE FILL	
261.31444	REINFORCING STEEL	
261.3145	ROOFING + FLASHING	
261.31451	B.U. ROOFING,INSUL.+FLASH.	
261.31452	B.U. ROOF+FLASH(NO INSUL)	
261.3146	INTERIOR WALLS + PARTITION	
261.31461	CONCRETE WALLS	
261.31462	CONCRETE BLOCK	
261.31463	METAL PARTITIONS	
261.31464	PLASTER BD PARTITIONS	
261.3147	DOORS + WINDOWS	
261.31471	ROOLING STEEL DOORS	
261.31472	PERSONNEL DOORS	
261.31473	SASH + GLAZING	
261.3148	WALLS,FLOORS+CEILG FINISHS	
261.3149	PAINTING	
261.31491	CONCRETE	
261.31492	STEELWORK	
261.31493	METAL DECK	
261.31494	SPECIAL METALLIC PAINT	

SECTION 6

SITE DESCRIPTION

6.1 GENERAL

This section sets forth the site and environmental data, derived from Appendix A of "Guide for Economic Evaluation of Nuclear Reactor Plant Designs," USAEC Report NUS-531, modified to reflect current requirements. These data form the bases of the criteria used for designing the facility and for evaluating the routine and accidental release of radioactive liquids and gases to the environment.

6.2 TOPOGRAPHY AND GENERAL SITE CHARACTERISTICS

The site is located on the east bank of the North River at a distance of twenty-five miles south of Middletown, the nearest large city. The North River flows from north to south and is one-half mile (2600 feet) wide adjacent to the plant site. A flood plain extends from both river banks an average distance of one-half mile, ending with hilltops generally 150 to 250 feet above the river level. Beyond this area, the topography is gently rolling, with no major critical topographical features. The plant site itself extends from river level to elevations of 50 feet above river level. The containment building, other seismic Category I structures and the switchyard are located on level ground at an elevation of 18 feet above the mean river level. This elevation is ten feet above the 100-year maximum river level, according to U.S. Army Corps of Engineers' studies of the area.

In order to optimize land area requirements for the nuclear power plant site, maximum use of the river location is employed. The containment structure is located approximately 400 feet from the east bank of the river. The site land area is taken as approximately 500 acres.

6.3 SITE ACCESS

Highway access is provided to the hypothetical site by five miles of secondary road connecting to a state highway; this road is in good condition and needs no additional improvements. Railroad access is provided by the construction of a spur which intersects the B&M Railroad. The length of the required spur from the main line to the plant site is assumed to be five miles in length. The North River is navigable throughout the year with a 40 feet wide by 12 feet deep channel. The distance from the shoreline to the center of the ship channel is 2000 feet. All plant shipments are assumed to be made overland except that heavy equipment (such as reactor vessel and generator stator) may be transported by barge. The Middletown Municipal Airport is located three miles west of the state highway, 15 miles south of Middletown, and ten miles north of the site.

6.4 POPULATION DENSITY AND LAND USE

The hypothetical site is near a large city (Middletown, 250,000 population) but in an area of low population density. Variation in population with distance from the site boundary is:

<u>Miles</u>	<u>Cumulative Population</u>
0.5	0
1.0	310
2.0	1,370
5.0	5,020
10.0	28,600
20.0	133,000
30.0	1,010,000

There are five industrial manufacturing plants within 15 miles of the hypothetical site. Four are small plants employing less than 100 people each. The fifth, near the airport, employs 2500 people. Closely populated areas are

found only in the centers of the small towns so the total land area used for housing is small. The remaining land, including that across the river, is used as forest or cultivated crop land, except for railroads and highways.

6.5 NEARBY FACILITIES

Utilities are available as follows:

- o Natural gas service is available two miles from the site boundary on the same side of the river
- o Communication lines are furnished to the project boundaries at no cost
- o Power and water for construction activities are available at the southwest corner of the site boundary.
- o Two independent offsite power sources (one at 500kV and one at 230kV) are available at the switchyard.

6.6 METEOROLOGY AND CLIMATOLOGY

6.6.1 Ambient Temperatures

The winters in the Middletown area are moderately cold, with average temperatures in the low 30's. The summers are fairly humid with average temperatures in the low 70's, and with high temperatures averaging around 82 F. The historic maximum wet bulb and dry bulb temperatures are 78 F and 99 F respectively.

The year-round temperature duration curves for the dry bulb temperatures and coincident wet bulb temperatures are shown in Figure 6-1.

6.6.2 Prevailing Wind

According to Weather Bureau records at the Middletown Airport, located ten miles north of the site on a low plateau just east of the North River, surface

winds are predominantly southwesterly 4 - 10 knots during the warm months of the year, and westerly 6 - 13 knots during the cool months.

There are no large diurnal variations in wind speed or direction. Observations of wind velocities at altitudes indicate a gradual increase in mean velocity and a gradual veering of the prevailing wind direction from southwest and west near the surface to westerly and northwesterly aloft.

In addition to the above, studies of the area indicate that there is a significant channeling of the winds below the surrounding hills into the north-south orientation of the North River. It is estimated that winds within the river valley blow approximately parallel to the valley orientation in excess of 50 percent of the time.

6.6.3 Atmospheric Diffusion Properties

The transport and dilution of radioactive materials in the form of aerosols, vapors, or gases released into the atmosphere from the Middletown nuclear power station are a function of the state of the atmosphere along the plume path, the topography of the region, and the characteristics of the effluents themselves. For a routine airborne release, the concentration of radioactive materials in the surrounding region depends on the amount of effluent released, the height of the release, the windspeed, atmospheric stability, and airflow patterns of the site, and various effluent removal mechanisms. Geographic features such as hills and valleys influence diffusion and airflow patterns. Of the diffusion models that have been developed, the straight line trajectory model is utilized to calculate the atmospheric diffusion from the Middletown site.

The straight-line trajectory model assumes that the airflow transports and diffuses effluents along a straight line through the entire region of interest in the airflow direction at the release point. The version of this model which is used is the Gaussian straight-line trajectory model. In this model, the windspeed and atmospheric stability at the release point are assumed to determine the atmospheric diffusion characteristics in the direction of airflow.

The equation for this model is:

$$(\overline{X/Q'})_D = 2.032 \sum_{ij} n_{ij} \left[N \overline{u}_i \sum_{zj}(X) \right]^{-1} \exp \left[-h_e^2 / 2 \sigma_{zj}^2(X) \right] \quad (1)$$

where:

- h_e is the effective release height;
- n_{ij} is the length of time (hours) weather conditions are observed to be at a given wind direction, windspeed class, i , and atmospheric stability class, j ;
- N is the total hours;
- $\overline{u}_i$ is the midpoint of windspeed class, i , at a height representative of release;
- $\sigma_{zj}(X)$ is the vertical plume spread without volumetric correction at distance, X , for stability class, j ;
- $\sum_{zj}(X)$ is the vertical plume spread with a volumetric correction for a release within the building wake cavity, at a distance, X , for stability class, j ; otherwise $\sum_{zj}(X) = \sigma_{zj}(X)$;
- $(\overline{X/Q'})_D$ is the average effluent concentration, X , normalized by source strength, Q' at distance, X , in a given downwind direction, D ; and
- 2.032 is $(2/\pi)^{1/2}$ divided by the width in radians of a 22.5° sector.

For ground-level releases only ($h_e = 0$), an adjustment is made in Equation (1) that takes into consideration initial mixing of the effluent plume within the building wake.

This adjustment is in the form of:

$$\sum_{zj}(X) = (\sigma_{zj}^2(X) + 0.5 D_z^2/\pi)^{1/2} \quad (2)$$

where:

D_z is the maximum adjacent building height either up or down-wind from the release point;

X is the distance from the release point to the receptor, measured from the lee edge of the complex of adjacent buildings;

$\sigma_{zj}(X)$ is the vertical standard deviation of the materials in the plume at distance, X , for atmospheric stability class, j ; and

$\sum_{zj}(X)$ is the vertical standard deviation of plume material as above, with the correction for additional diffusion within the building wake capacity, restricted by the condition that

$$\sum_{zj}(X) < \sqrt{3} \sigma_{zj}(X)$$

Since the straight-line flow model does not consider the effects of spatial and temporal variations in airflow in the region of the site, appropriate adjustments to the calculated $(\overline{X/Q'})_D$ values are made to account for these effects.

For the Middletown site these adjustments are: For downvalley airflow, the right side of Equation (1) is multiplied by 5 for distances less than 20 miles. For upvalley airflow, the right side of Equation (1) multiplied by

1.5 for all distances. For downvalley airflow beyond 20 miles and crossvalley flow, no correction is applied.

During the warm months of the year, according to analysis of Weather Bureau records, the atmospheric conditions near the surface are 25 percent unstable (Pasquill A, B, and C), 40 percent neutral (Pasquill D), and 35 percent stable (Pasquill E and F). Average wind speeds are approximately six miles per hour during unstable conditions, ten miles per hour during neutral conditions, and four miles per hour during stable conditions.

During the cool months of the year, the atmospheric conditions are 15 percent unstable, 50 percent neutral, and 35 percent stable. Average wind speeds are six miles per hour during unstable conditions, twelve miles per hour during neutral conditions, and four miles per hour during stable conditions.

Using these atmospheric conditions and Equation (1), the annual average wind diffusion estimates are calculated for ground level release and are found in Table 6-1. Since the data are independent of sector, only a distance dependent diffusion estimate can be calculated. These estimates vary with direction only as the spatial and temporal adjustment factors vary.

6.6.4 Severe Meteorological Phenomena

A maximum instantaneous wind velocity of 100 mph has been recorded at the site. During the past 50 years, three tropical storms, all of them in the final dissipation stages, have passed within 50 miles of the site. Some heavy precipitation and winds in excess of 40 miles per hour were recorded, but no significant damage other than to crops resulted.

The area near the site experiences an average of 35 thunderstorms a year, with maximum frequency in early summer. High winds near 60 mph, heavy precipitation, and hail are recorded about once every four years.

In forty years of record keeping, there have been twenty tornadoes reported within fifty miles of the site. This moderately high frequency of tornado activity indicates a need to design Seismic Category I structures at the site for the possibility of an on-site tornado occurrence. Maximum tornado frequency occurs in May and June.

During the past forty years, there have been ten storms in which freezing rain has caused power transmission line disruptions. Most of these storms have occurred in early December.

6.6.5 Potential Accident Release Meteorology

In the event of an accidental release of fission products to the atmosphere, transport and diffusion is determined by the meteorological conditions at the site for the duration of the accident, which is assumed to be 30 days.

The calculation of the potential doses for the various design base accidents is based on meteorological conditions described in NRC's Regulatory Guide 1.4.

Ground-Level Release

The atmospheric diffusion model as a function of the distance from the reactor is based on the following assumptions:

1. The basic equation for atmospheric diffusion from a ground level point source is:

$$X/Q = \frac{1}{\pi u \sigma_y \sigma_z} \quad (3)$$

where:

χ = the short average centerline value of the ground level concentration (curies/meter³)

Q = material release rate (curies/sec)

u = wind speed (meters/sec)

σ_y = the horizontal standard deviation of the plume (meters)

σ_z = the vertical standard deviation of the plume (meters)

2. For time periods of greater than eight hours the plume is assumed to meander and spread uniformly over a 22.5° sector. The resultant equation is:

$$\chi/Q = \frac{2.032}{\sigma_z u x} \quad (4)$$

where: x = distance from the point of release (meters)

3. The atmospheric diffusion model for ground level releases is based on the information in the table below.

Time Following Accident

0-8 hrs.	Pasquill Type F, windspeed 1 meter/sec. uniform direction
8-24 hrs.	Pasquill Type F, windspeed 1 meter/sec. variable direction within a 22.5° sector
1-4 days	(a) 40% Pasquill Type D, windspeed 3 meters/sec (b) 60% Pasquill Type F, windspeed 2 meters/sec (c) wind direction - variable within a 22.5° sector
4-30 days	(a) 33.3% Pasquill Type C, wind speed 3 meters/sec (b) 33.3% Pasquill Type D, wind speed 3 meters/sec (c) 33.3% Pasquill Type F, wind speed 2 meters/sec (d) Wind direction - 33.3% frequency in a 22.5° sector

Figure 6-2 gives the ground level release atmospheric diffusion factors based on the above parameters.

In calculating potential exposures, the 0-8 hour concentrations are reduced by a factor ranging from one to a maximum of three (see Figure 6-3) to compensate for additional diffusion produced by the turbulent wake of the containment building. The volumetric building wake correction, as defined in Section 3.3.5.2 of Meteorology and Atomic Energy 1968, is used only in the 0-8 hour period; it is used with a shape factor of .5 and the minimum cross-sectional area of the containment building (approximately 2000 square meters).

6.7 HYDROLOGY

The North River provides an adequate source of raw make-up water for the station. The average maximum temperature is 75 F and the average minimum is 39 F. The mean annual temperature is 57 F.

U.S. Army Corps of Engineers' studies indicate that the 100 year maximum flood level rose to eight feet above the mean river level. There are no dams near the site whose failure could cause the river to rise above the eight foot level.

6.8 GEOLOGY SEISMOLOGY

6.8.1 Soil Profiles and Load Bearing Characteristics

Soil profiles for the site show alluvial soil and rock fill to a depth of eight feet; Brassfield limestone to a depth of 30 feet; blue weathered shale

and fossiliferous Richmond limestone to a depth of 50 feet; and bedrock below a depth of 50 feet. Allowable soil bearing is 6000 psf and rock bearing characteristics are 18,000 psf and 15,000 psf for Brassfield and Richmond strata, respectively. No underground cavities exist in the limestone.

6.8.2 Seismology

The site is located in a generally seismically inactive region. Historical records show three earthquakes have occurred in the region between 1870 and 1975. A safe shutdown earthquake (SSE) with a horizontal ground acceleration of 0.25 g provides conservative design margin. For design purposes, the horizontal and vertical component Design Response Spectra given in NRC Regulatory Guide 1.60, Rev. 1, December 1973, are linearly scaled to a horizontal ground acceleration of 0.25 g.

6.9 SEWAGE AND RADIOACTIVE WASTE DISPOSAL

6.9.1 Sewage

All sewage receive primary and secondary treatment prior to discharge into the North River.

6.9.2 Gaseous and Liquid Radioactive Wastes

The gaseous and liquid effluent releases from this plant comply with 10 CFR Part 20 and the intent of Appendix I of 10 CFR Part 50.

6.9.3 Solid Radioactive Wastes

Storage on site for decay is permissible but no ultimate disposal on site is planned.

TABLE 6-1

ANNUAL AVERAGE ATMOSPHERIC DIFFUSION ESTIMATES

(Sec/m³)

Ground Level Release

<u>Distance (Miles)</u>	<u>Down Valley</u>	<u>Up Valley</u>	<u>Cross Valley</u>
.5	1.2-5*	3.7-6	2.5-6
1.5	2.0-6	5.9-7	4.0-7
2.5	8.8-7	2.6-7	1.8-7
3.5	5.3-7	1.6-7	1.0-7
4.5	3.6-7	1.1-7	7.2-8
7.5	1.7-7	5.1-8	3.4-8
15.0	6.5-8	1.9-8	1.3-8
25.0	6.5-9	9.8-9	6.5-9
35.0	4.2-9	6.3-9	4.2-9
45.0	3.1-9	4.6-9	3.1-9

* 1.2-5 = 1.2×10^{-5} (typical example)

FIGURE 6-1 TEMPERATURE DURATION CURVES: MIDDLETOWN U.S.A.

FIGURE 6-2 GROUND RELEASE — ATMOSPHERIC DIFFUSION FACTORS

FIGURE 6-3 BUILDING WAKE DIFFUSION CORRECTION FACTOR

SECTION 6
SITE DESCRIPTION

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
262.1526	VALVES	
262.15266	BUTTERFLY	
262.1527	PIPING-MISC ITEMS	
262.15271	HANGERS + SUPPORTS	
262.15272	INSULATION	
262.15273	SPECIALTIES	
262.15274	PIPE TRENCHING	INCLUDED IN ACCOUNT 262.15174
262.1528	INSTRUMENTATION & CONTROL	ALLOWANCE
262.153	MAKEUP WTR PRETREATMNT SYS	<p>TYPE - HORIZONTAL CLARIFIERS INCLUDING ALL PIPING, VALVES AND ACCESSORIES AS REQUIRED FOR A COMPLETE SYSTEM.</p> <p>FLOW RATE - 18,000 GPM</p> <p>SAFETY CLASS - NNS</p> <p>SEISMIC CAT. - NONE</p> <p>DESIGN CODE -</p> <p>EQUIPMENT SUMMARY:</p> <p>HORIZONTAL CLARIFIERS - 3 x 33.3 PCT</p> <p>SAND FILTERS - 3 x 50 PCT</p> <p>CARBON FILTERS - 3 x 50 PCT</p> <p>CHEMICAL FEEDS - 1 LOT</p> <p>SLUDGE DEWATERING SYS - 1 LOT</p>

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
262.15151	2 IN. + SMALLER	
262.15152	2.5 IN + LARGER	
262.151521	CONCRETE/NNS	
262.1516	VALVES	
262.15162	CHECK VALVES	
262.15163	GLOBE VALVES	
262.15166	BUTTERFLY VALVES	
262.1517	PIPING - MISC. ITEMS	
262.15171	HANGERS + SUPPORTS	
262.15172	INSULATION	NONE
262.15173	SPECIALTIES	
262.15174	PIPE TRENCHING	
262.151741	EXCAVATION	
262.151742	BACKFILL	
262.151743	COMPACTED SAND BED	
262.1518	INSTRUMENTATION + CONTROL	TRANSMITTER 5 BOARD MOUNTED INDICATOR 3 LOCAL INDICATOR 4 FLOW ELEMENT 2 ANNUNCIATOR 4
262.152	BLOWDN SYSTEM	
262.1525	PIPING	
262.15251	2 IN. + SMALLER	
262.15252	2.5 IN. + LARGER	
262.152521	CONCRETE/NNS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
262.138	INSTRUMENTATION + CONTROL	TRANSMITTERS - 9 LOCAL INDICATORS - 6 BOARD MOUNTED INDICATOR 10 FLOW ELEMENT 7 RECORDER 8 TEMP ELEMENT 32 TEMP TRANSMITTER 20 CONTROLLER 5 ANALYTICAL INSTRUMENT 3 PROCESS SWITCH 1 ANNUNCIATOR 21 MISC DEV 29
262.15	MAIN CT. MAKEUP + BLOWDN SYS.	
262.151	MAKE-UP WATER SYSTEM	
262.1511	ROTATING MACHINERY	
262.15111	MAKE-UP PUMP + MOTOR	
262.151111	MAKE-UP PUMP	QUANTITY 2 X 100 PCT. TYPE CENTRIFUGAL ORIENTATION VERTICAL FLOW RATE 18,000 GPM SPEED 705 RPM TDH 40 FT BHP 214 HP NPSH 20 FT EFFICIENCY 85 PCT. DESIGN PRES 150 PSI DESIGN TEMP 100 F MATERIAL NI-RESIST COL. AND BOWL S.S. IMPELLER SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
262.151112	MAKE-UP PUMP MOTOR	TYPE RATING 250 HP SPEED 720 RPM VOLTAGE 4 KV, 3 PH, 60 HZ
262.1515	PIPING	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
262.129231	SULPHURIC ACID STORAGE TAN	QUANTITY 1 ORIENTATION HORIZONTAL DIMENSIONS VOLUME 18,000 GAL DESIGN PRES. 15 PSIG DESIGN TEMP. 150 F MATERIAL CARBON STEEL SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE API
262.12925	PIPING	
262.129251	2 IN + SMALLER-CS/NNS	
262.129252	2.5 IN + LARGER	
262.12926	VALVES	ALLOWANCE
262.13	COOLING TOWERS	
262.132	HEAT XFER EQUIPMENT	
262.1321	COOLING TOWERS(CT)-MAIN	QUANTITY 3 X 33-1/3 PCT. TYPE CIRCULAR MECH. DRAFT CONCRETE SHELL WIDTH 250 FT HEIGHT TO FAN DECK 49 FT VOLUME OF BASIN 340,000 CF EACH NO. OF FANS 12 EACH HEIGHT OF FAN SHROUD 18 FT DIAMETER OF FAN 33 FT POWER OF FAN 150 HP DESIGN FLOW 196,000 GPM EACH DESIGN WET BULB 74 F DESIGN APPROACH 18 F DESIGN RANGE 26 F SAFETY CLASS NNS SEISMIC NONE DESIGN CODE

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
262.128	INSTRUMENTATION + CONTROL	<p>TRANSMITTER 1</p> <p>LOCAL INDICATOR 3</p> <p>BOARD MOUNTED INDICATOR 15</p> <p>FLOW ELEMENT 1</p> <p>TEMP ELEMENT 1</p> <p>TEMP TRANSMITTER 3</p> <p>PROCESS SWITCH 4</p> <p>MISC DEV 1</p>
262.129	SKIDS / FOUNDATIONS	
262.1291	CHLORINATION SYSTEM	<p>8,000 LB PER DAY CHLORINATOR USING</p> <p>LIQUID CHLORINE STORED IN ONE TON</p> <p>CYLINDERS. CHLORINATOR IS COMPLETE</p> <p>WITH REGULATOR, WATER DILUTION STATION</p> <p>AND EVAPORATOR -</p>
262.1292	SULPHURIC ACID FEED SYSTEM	
262.12921	ROTATING MACHINERY	
262.129211	SULFURIC ACID FEED PUMP+MT	<p>QUANTITY 2 x 100 PCT.</p> <p>TYPE POSITIVE DISPLACEMENT</p> <p>ORIENTATION HORIZONTAL</p> <p>FLOW RATE 0 - 50 GPH</p> <p>SPEED</p> <p>TDH</p> <p>BHP</p> <p>NPSH</p> <p>EFFICIENCY</p> <p>DESIGN PRES</p> <p>DESIGN TEMP</p> <p>MATERIAL ALLOY 20</p> <p>SAFETY CLASS NNS</p> <p>SEISMIC CAT. NONE</p> <p>DESIGN CODE</p>
262.129212	SULF ACID FEED PUMP MOTOR	<p>TYPE</p> <p>HORSEPOWER 0.5 HP</p> <p>SPEED</p> <p>VOLTAGE 460V, 3 PH, 60 HZ</p>
262.12923	TANKS AND PRESSURE VESSELS	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
262.1251	2 IN + SMALLER	
262.1252	2.5 IN + LARGER	
262.12521	CONCRETE/NNS	
262.12522	CS/NNS	
262.126	VALVES	
262.1266	BUTTERFLY	
262.127	PIPING / MISC. ITEMS	
262.1271	HANGERS + SUPPORTS	NONE
262.1272	INSULATION	
262.1273	SPECIALTIES	
262.1274	PIPE TRENCHING	
262.12741	EXCAVATION	
262.127411	EARTH EXCAVATION	
262.127412	ROCK EXCAVATION	
262.12742	BACKFILL	
262.12743	COMPACTED SAND BED	
262.12744	SUBSTRCTURE CONCRETE	
262.127441	FORMWORK	
262.127442	REINF STEEL	
262.127443	CONCRETE	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
262.11521	CS/NNS	
262.116	VALVES-SCREEN WASH	
262.1162	CHECK	
262.1166	BUTTERFLY	
262.117	PIPING-MISC ITEMS	
262.1171	HANGERS + SUPPORTS	
262.1172	INSULATION	
262.1173	SPECIALTIES	
262.12	CIRCULATING WATER SYSTEM	
262.121	ROTATING MACHINERY	
262.1211	CIRCULATING WATER PUMP+MTR	
262.12111	CIRC WATER PUMP	QUANTITY 4 X 25 PCT TYPE MIXED FLOW ORIENTATION VERTICAL FLOW RATE 147,500 GPM SPEED 320 RPM TDH 105 FT BHP 4,495 HP NPSH 30 FT EFFICIENCY 87 PCT. DESIGN PRESS 150 PSIA DESIGN TEMP 100 F MATERIAL NI-RESIST COL. AND BOWL S.S. IMPELLER NNS NONE SAFETY CLASS SEISMIC CAT. DESIGN CODE
262.12112	CIRC WATER PUMP MOTOR	TYPE HORSEPOWER 5,000 HP SPEED 320 RPM VOLTAGE 13.2 KV, 3 PHASE, 60 HZ
262.125	PIPE	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
262.114	PURIFICATION+FILTRATION EQ	
262.1141	TRAVELING SCREENS	QUANTITY 2 X 50 PERCENT SCREEN SIZE 6 FT WIDE X 33 FT HIGH BASKET SIZE 5FT-6IN WIDE X 30IN HI. 3/8 IN. S.S. MESH SCREEN SPEED HIGH - LOW - FLOW VEL. 1/2 FPS APPROACH SCREEN 1 FPS THROUGH MESH DESIGN FLOW 18,000 GPM
262.1142	TRASH RACK	TYPE VERTICAL BARS DIMENSION 0.5 IN WIDE BY 3.5 IN DEEP BY 30 FT HIGH, BAR SPACING 3.5 IN APART MATERIAL CARBON STEEL
262.1143	TRASH RAKE	MOTORIZED, FULLY AUTOMATIC RAKING TYPE, SIZED TO CLEAN RACK IN FRONT OF EACH SCREEN IN SINGLE PASS
262.1144	STOP LOGS	REINFORCED CONCRETE PLANKS, 6 IN THICK BY 18 IN HIGH BY 6 FT LONG, AS REQUIRED
262.1145	SCREEN WASH STRAINER	QUANTITY 1 TYPE AUTOMATIC-SELF CLEANING FLOW RATE 500 GPM DESIGN PRES. 50 PSIG DESIGN TEMP 100 F DIFF. PRES. CLEAN/DIRTY 2 PSI RATING/SIZE / 1/8 IN MATERIAL C.S. BODY, S.S. MESH DIRT CAPACITY SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
262.115	PIPING-SCREEN WASH	
262.1151	2 IN. + SMALLER	
262.1152	2.5 IN. + LARGER	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN,USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
261.4147	DOORS + WINDOWS	
261.41472	PERSONNEL DOORS	
261.41473	SASH + GLAZING	
261.4149	PAINTING	
261.41492	STEELWORK	
261.41493	METAL DECK	
261.424	LIGHTING + SERVICE POWER	
262.	MECHANICAL EQUIPMENT	
262.1	HEAT REJECTION SYSTEM	
262.11	WATER INTAKE EQUIPMENT	
262.111	ROTATING MACHINERY	
262.1111	SCREEN WASH PUMP+MOTOR	
262.11111	SCREEN WASH PUMP	QUANTITY 2 X 100 PCT. TYPE CENTRIFUGAL ORIENTATION VERTICAL FLOW RATE 500 GPM SPEED 3600 RPM TDH 100 FT BHP 17 HP NPSH EFFICIENCY 75 PCT. DESIGN PRES 100 PSI DESIGN TEMP 100 F MATERIAL NI-RESIST COL. AND BOWL S.S. IMPELLER SAFETY CLASS NNS SEISMIC CAT. NONE DESIGN CODE
262.11112	SCREEN WASH PUMP MOTOR	TYPE RATING 20 HP SPEED 3600 RPM VOLTAGE 460V, 3 PHASE, 60 HZ

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
261.4111	EARTH EXCAVATION	
261.4114	BACKFILL	
261.413	SUBSTRUCTURE CONCRETE	
261.4131	FORMWORK	
261.4132	REINF. STEEL	
261.4133	CONCRETE	
261.4134	EMBEDDED STEEL	
261.4135	FLOOR FINISH	
261.4136	WATERPROOFING	
261.4137	CONSTRUCTION JOINTS	
261.4138	RUBBING CONCRETE SURFACES	
261.4139	WIRE FABRIC	
261.414	SUPERSTRUCTURE	
261.4141	CONCRETE WORK	
261.4142	STRUCT. + MISC. STEEL	
261.41421	STRUCT. STEEL	
261.41423	MISC. FRAMES, ETC.	
261.4143	EXTERIOR WALLS	
261.41432	MASONRY	
261.4144	ROOF DECK	
261.41441	METAL ROOF DECK	
261.4145	ROOFING + FLASHING	
261.41451	B.U. ROOFING, FLASHING + INSUL	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
261.322112	ROOF VENTILATORS MOTORS	TYPE - AC INDUCTION HORSEPOWER - 5 HP SPEED - VOLTAGE - 460 V, 3 PH, 60 HZ
261.3222	HEAT TRANSFER EQUIPMENT	
261.32221	ELECTRIC UNIT HEATER+MOTOR	
261.322211	ELECTRIC UNIT HEATER	QUANTITY - 4 X 25 PCT HEATER: TYPE - ELECTRIC KW - 48 KW VOLTAGE - 460 V, 3 PH, 60 HZ FAN: TYPE - CENTRIFUGAL FLOW RATE - 3,700 CFM STATIC PRESS -
261.322212	ELECTRIC UNIT HEATER+MOTOR	TYPE - AC INDUCTION HORSEPOWER - 0.5 HP SPEED VOLTAGE 115 V, 1 PH, 60 HZ
261.3226	VALVES + DAMPERS	
261.32269	SPECIAL VALVES	
261.322691	INTAKE LOUVERS	QUANTITY - 4 X 25 PCT TYPE - FLOW - 25,000 CFM SIZE - 172 IN W X 60 IN H MATERIAL - EXTRUDED ALUMINUM SAFETY CLASS - NNS SEISMIC CAT. - NONE
261.3228	INSTRUMENTATION + CONTROL	
261.324	LIGHTING + SERVICE POWER	
261.4	CHLORINATION BUILDING	SEE COST ESTIMATE FOR STRUCT QUANTITIES
261.41	BUILDING STRUCTURE	
261.411	EXCAVATION WORK	

EQUIPMENT LIST - REPORT 1

03/29/77

MODEL 148 - 1139 MWE/3425 MWT PWR - 2.5 IN HG AV - MIDDLETOWN, USA

- COST BASIS 07/76

ACCOUNT NUMBER	ITEM	DESCRIPTION
261.31495	HANDRAIL	
261.31496	EPOXY	
261.32	BUILDING SERVICES	
261.321	PLUMBING + DRAINS	
261.3211	ROOF DRAINS + PIPING	
261.32111	DRAINS	QUANTITY - 4 SIZE - 6 IN
261.32115	PIPING (ALL 2.5 IN+LARGER)	
261.321151	GALV STEEL/NNS	
261.3212	FLOOR DRAINS + PIPING	
261.32121	DRAINS	QUANTITY - 6 SIZE - 4 IN
261.32125	PIPING (ALL 2.5 IN+LARGER)	
261.321251	CS/NNS	
261.321252	CI/NNS	
261.322	HEATING, VENT, + AIR COND	
261.3221	ROTATING MACHINERY	
261.32211	ROOF VENTILATORS + MOTORS	
261.322111	ROOF VENTILATORS	QUANTITY- 4 X 25 PCT TYPE - AXIAL FAN FLOW RATE - 25,000 CFM S.P. - 0.5 IN SAFETY CLASS - NNS SEISMIC CAT. - NONE DESIGN CODE -